84th YEAR

AMERICAN GAS JOURNAL

DECEMBER 1943

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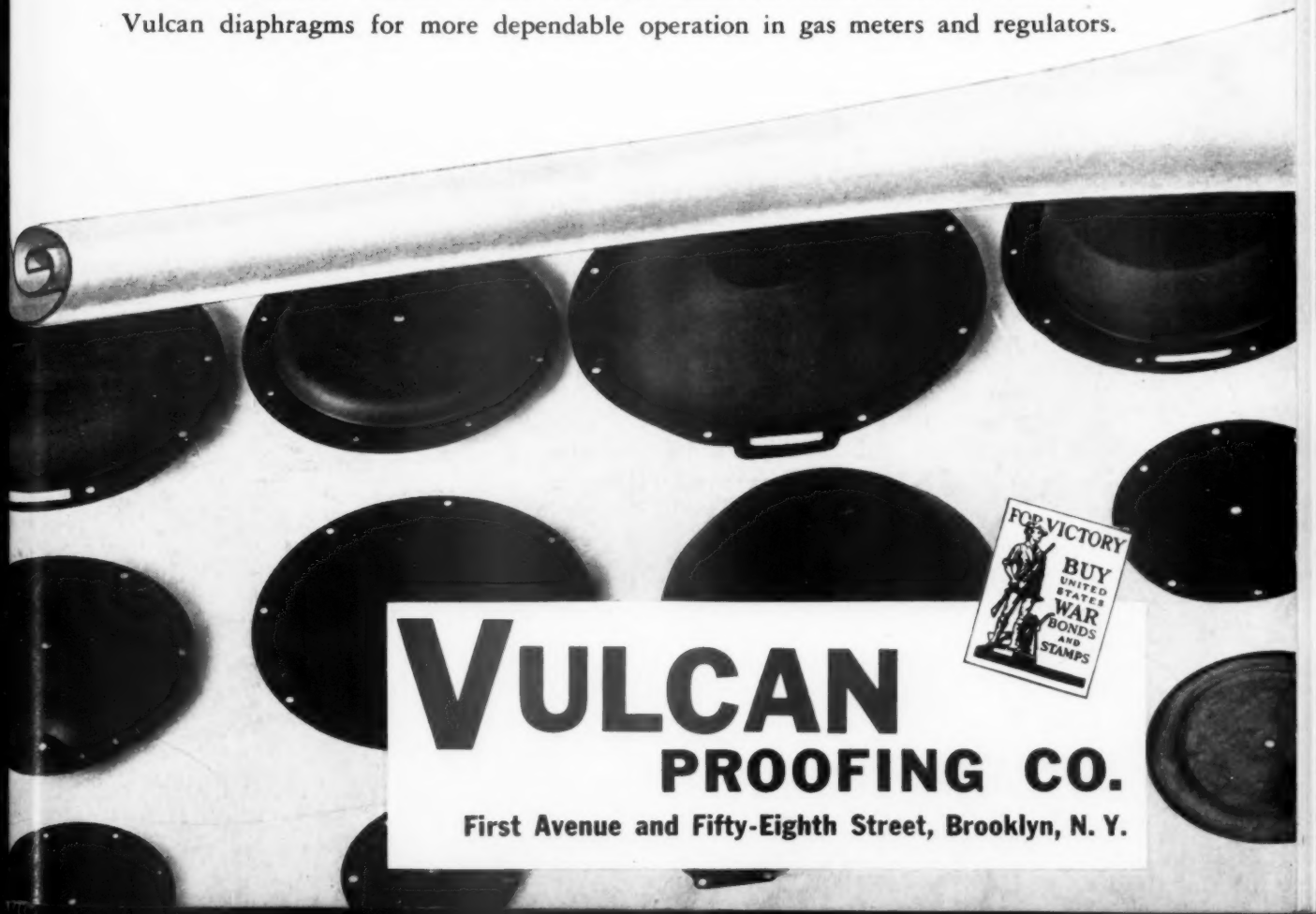

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For information, write to: CP Gas Range Division, Association of Gas Appliance and Equipment Mfrs., 60 East 42 St., New York 17, N. Y.

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★

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AMERICAN STOVE CO.
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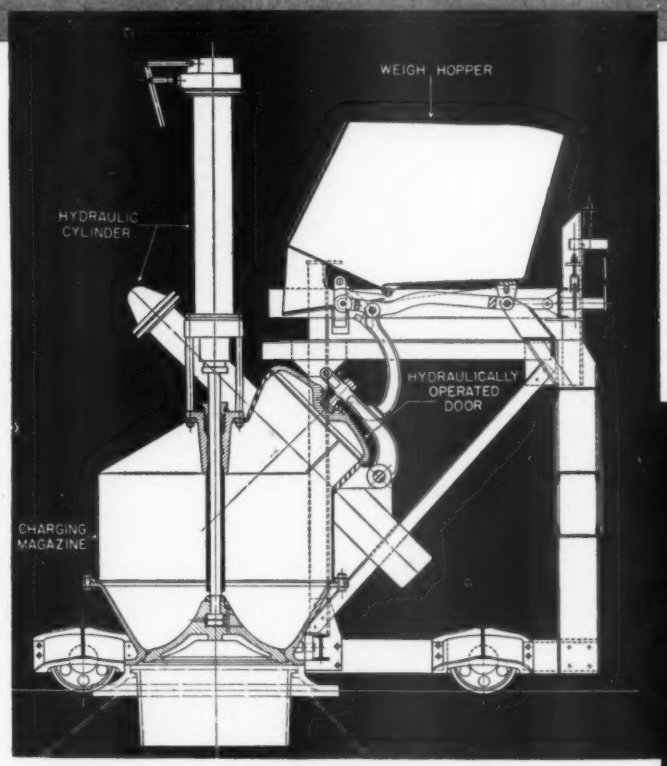
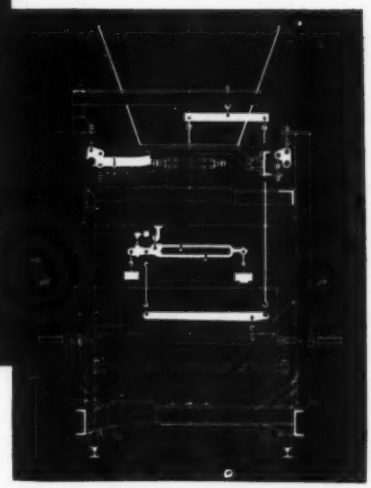


INCREASES CAPACITY *Saves Labor*



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40 Rector Street New York, N. Y.

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.complete

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- Relief Valves: High or Low Pressure
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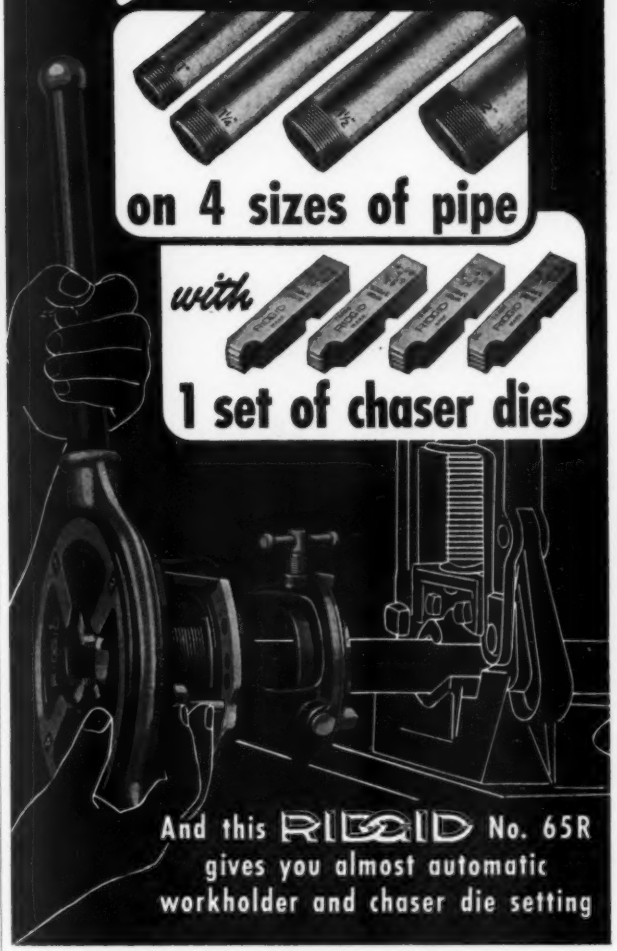
on 4 sizes of pipe
with
1 set of chaser dies
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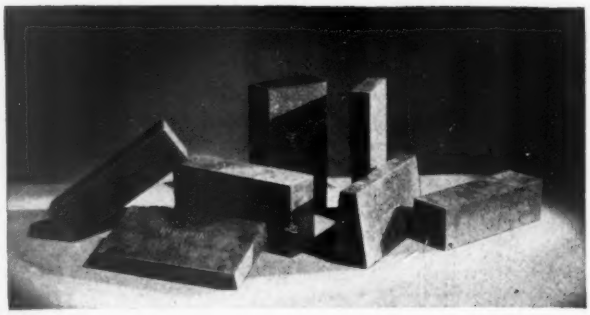
1. Long Lining Life

Crystolon (silicon carbide) brick resist the penetration of slag which causes rapid wear and spalling. When the clinker is broken away these bricks still present a hard, dense, refractory surface.

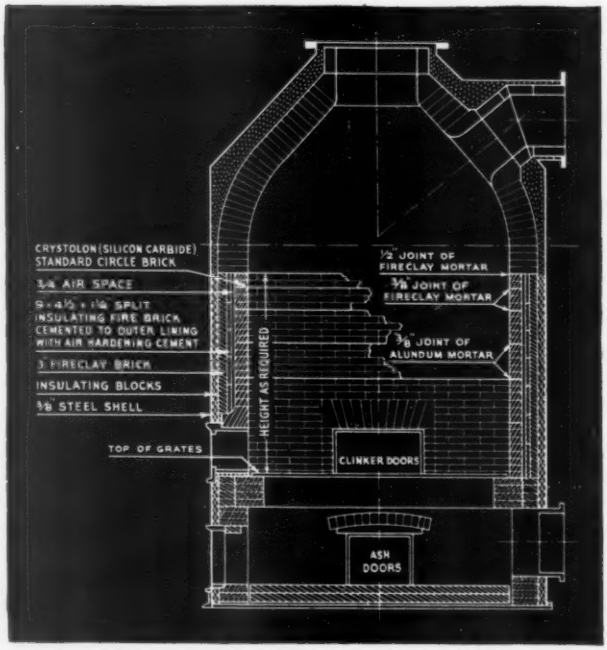


2. Decreased Maintenance Cost

Crystolon brick reduce the necessity of localized patching and the danger of burning through into the backing-up brick, and they greatly extend the periods between major repair jobs (over 19,000 hours in some plants).

3. Increased Capacity

The dense hard surface of ***Crystolon*** brick reduces the tendency of clinkers to adhere to the side walls. Time required for clinkering and cleaning the fire is shortened. Once the clinker ring is broken it readily falls free. Therefore, the set is open only briefly and has less time to cool—a saving in coke and in time required to bring it back up to production temperatures.


CRYSTOLON (SILICON CARBIDE) STANDARD CIRCLE BRICK
¾" AIR SPACE
9" × 4½" × 1½" SPLIT INSULATING FIRE BRICK CEMENTED TO OUTER LINING WITH AIR HARDENING CEMENT
3" FIRECLAY BRICK
INSULATING BLOCKS
⅜" STEEL SHELL
TOP OF GRATES
HEIGHT AS REQUIRED
½" JOINT OF FIRECLAY MORTAR
⅜" JOINT OF FIRECLAY MORTAR
⅜" JOINT OF ALUNDUM MORTAR
CLINKER DOORS
ASH DOORS

•

NORTON COMPANY
Worcester, Massachusetts

NORTON ELECTRIC FURNACE FUSED REFRACTORIES

VOLUME 150
NUMBER 6

AMERICAN GAS JOURNAL

WHOLE
NUMBER 3838

ESTABLISHED 1859

DECEMBER, 1943

PUBLISHED MONTHLY BY
AMERICAN GAS JOURNAL, Inc.
53 Park Place, New York

S. G. KRAKE, *President and Treasurer*

M. E. KELLEHER, *Secretary*

A. I. PHILLIPS, *Editor*

H. T. MATTHEW, *Business Manager*

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10515 Wilbur Ave., Cleveland, Ohio
Tel. Sweetbrier 0052

Copyright, 1943, American Gas Journal, Inc.

Subscription $2.00 per year U.S.A.; $3.00 Canada; $4.00 Foreign. Single copies, 25 cts.

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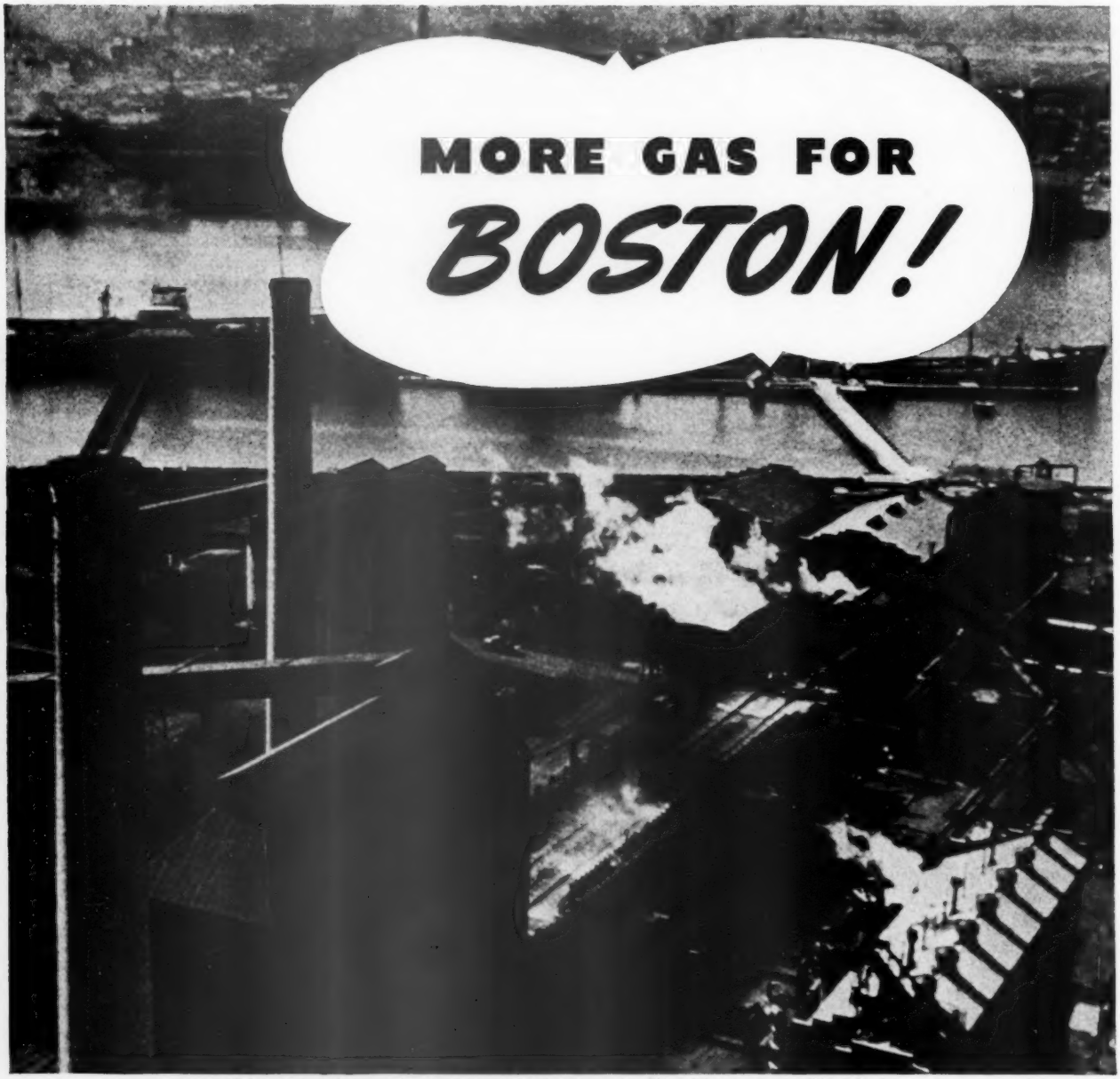

Prize winning photograph by Albert Crownfield, Jr., Boston Consolidated Gas Co., Boston, Massachusetts.

IN BOSTON . . . Frisco . . . or Kokomo, in every city in the country, the Gas Industry has been called upon to devote all out effort for the production of its crucial product. In face of the terrific demand of war industries . . . and domestic needs, every requirement has been met.

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CONNELLY IRON SPONGE & GOVERNOR CO.

CHICAGO, ILL. ★ ELIZABETH, N. J.

DECEMBER
1943

AMERICAN GAS JOURNAL

VOLUME 159
NO. 6

As the JOURNAL Sees It

EVERYWHERE today, while not neglecting the obligations imposed by the war, business executives, industries, trade associations, and citizen groups are studying seriously the problems that peace will bring, and trying to devise adequate plans to meet them. Reconversion of plants, re-employment, re-construction of sales forces, the potentialities of new products, market extension, these and other essential matters are being thoroughly explored and weighed.

But in all this worthy planning there is one problem that seemingly has been practically ignored, and yet in importance and consequence it is fundamental to the success of all plans for normal resumption of the national effort. It is this: Where, under the existing fiscal policies of the Federal Government, including such intricate matters as re-negotiation, the Excess Profits Tax, and taxation of industry to the hilt, will business, no matter how well intentioned, be able to obtain the money to set in motion the machinery of recovery?

The logical answer is permission from the Government to set aside reserves *now*, and before re-negotiation and the payment of Federal taxes. Only in this way can the aims of reconstruction—full employment, plant re-conversion, re-modelling, and rehabilitation — be effected. Such reconstruction is elemental to after-war prosperity.

Practically all of the larger manufacturers of gas ranges and other gas appliances and equipment, have been forced to convert practically 100 per cent to war work. In the interim their old equipment has become obsolete and useless, and what they have been able to use is now so worn that it is hypothetical if much of it can be used in peace-time practices. Reconversion for these, and many other manufacturers also, will be a problem of the first magnitude. There has been practically no replacement of machinery during the war, and speedy resumption of normal activities will be absolutely dependent on the availability of new dies, tools, and equipment — and, again we say: Industry should be permitted to purchase these now.

Many manufacturers could place orders now for machine tools that will be necessary to shorten the reconversion period to be delivered at a later date. This would enable the machine tool manufacturers to build up a backlog of orders, and when ready for delivery, could and should be paid for out of an allowable reserve by the government to the manufacturers for this purpose. This would greatly help to keep many men employed building tools, and would shorten the period of conversion.

The Federal Government is fully aware of the situation, but it is not yet prepared to act, for the reason that it has not discovered a satisfactory formula with the assurance of success in advance. "The wheels of the gods grind slowly."

If the Bureau of Internal Revenue were to decide that the deduction of such reserves were justified no action would be necessary, but apparently the Bureau is not inclined to permit such action. Therefore it would appear that the only alternative is the immediate revision by Congress of the National Revenue Act, making the setting aside out of earnings such reserves absolutely legal.

If some action of this kind is not taken, the results may be very serious indeed. In case the war ends suddenly a majority of contracts will be cancelled as a matter of course. Such preemptory action would mean that a majority of companies doing war work would not only be obligated to the government for their renegotiated contracts, but the contracts that still remained to be modified. Undoubtedly this would mean that many companies would be faced with large cash liabilities to the government.

Then, in addition, there would be the question of accrued taxes, dismissal pay, the re-development of former markets, the re-conversion of plants, and peace-time rehabilitation of inventories. Without adequate reserves no one of these problems could be solved quickly.

There is general agreement among executives that the present re-negotiation law should be amended to permit companies to provide reserves against contingencies that may arise during the period of re-adjustment. They point out that even where earnings have shown substantial expansion, the profit thereon is not a realizable asset, and for various reasons. They may be tied up in inventory, for example, or be needed for the payment of taxes or for the retirement or reduction of debt.

According to the National Industrial Conference Board drastic reduction of reserves was reported by more than 40 per cent of the companies replying to their questionnaire. There were very few companies that did not feel the effects of the act on their reserves. Then, it must be remembered that after renegotiation comes the Excess Profits Tax to take 80 to 90 per cent of the net income remaining. Federal corporation taxes this year are expected to aggregate 9 billion dollars, as compared with approximately 2 billions in 1941, when they absorbed one third of the taxable net income of such corporations.

Reconversion of industry and business that will assure a continuation of employment and a high level of trade and commerce is a problem to be faced. Only if permitted to accumulate the necessary reserves for the huge task can business meet the challenge successfully and in a reasonably short period of time. Industry can and will do it part if the government co-operates.

Hartford's Post-War Sales Plan

By
Howard R. Carlson

Howard R. Carlson
General Sales Manager,
The Hartford Gas Company

MANY in the gas industry have expressed an interest in our post-war planning program. I believe this has been so primarily because of our method selected to accomplish the task. The following, therefore, is confined to how we have organized for post war planning and the ground we propose to cover.

Early in the year a Post War Planning Committee was formed consisting of five members. Later, as the program developed, two more members were added, making seven on the present Committee. As our proposed program contemplated company-wide planning, the Committee Membeship was built up on the basis of selecting those individuals from various divisions of the Company who were likely to be most frequently required to give time to this work.

POST WAR PLANNING PROGRAM
THE HARTFORD GAS COMPANY
Members P. W. P. Committee

- Supt. Production & Distribution
- Supt. Service Operations
- Supt. Service Maintenance
- Industrial Gas Engineer
- Appliance Sales Mgr.
- Sales Promotion Mgr.
- General Sales Mgr.—(Chairman)

Additional Members of Sub-Committees

- Gen. Supt. of Production & Distribution
- Secy. & Office Mgr.
- Asst. Treas. & Chief Accountant
- Mgr. Manchester Division
- House Htg. Engineer
- Commercial Sales Rep.
- District Sales Supervisor
- Director, Home Service Div.
- Asst. to Dir., Home Service Div.
- Architectural Advisor (outside)

Our meeting schedule was on a semi-monthly basis. We started off without any fixed ideas or preconceived notions about what should constitute a Post-War Planning Program or how it should be conducted.

Through our discussions, our wartime and post-war needs and problems began to more clearly reveal themselves and a program of study was developed. At these meetings, one of the members acts as secretary so that we have recorded minutes to refer to.

All study projects are handled on a sub-committee basis. A member of the Planning Committee acts as chairman of the sub-committee to which the project has been assigned. To work with the Planning Committee member on these sub-committees, we have nine other key individuals of our Company engaged in the work, and one from the outside. In this way the Planning Committee has available the many other specialized talents so necessary to enable it to do a satisfactory job of a rather comprehensive program.

The effect of this organizational procedure is to enroll, not just a few, but practically all of our department and divisional heads and specialists in organized thinking, planning and action for the present as well as for the post war period. This procedure breaks down departmental lines and helps to emphasize to each individual the mutuality of interest in all company problems regardless of their nature. This procedure eliminates the possibility of tying up the time of valuable and busy personnel in a discussion of project details about which they need not be familiar or to which they have no special contribu-

REFERENCE SHEET "C" Post-War Planning Committee

(The Hartford Gas Company) Assignments to B.H. Dingley

(Original size 8 1/2" X 11")

ITEM	REF. NO.	DATE	COMMITTEE
1. APPLIANCE & EQUIP. IMPROVEMENT			
a. Gas Kitchen Htg. Range Development	6	9/43	B.H.D: H.E.J.
b. Dual Oven Range Study	7	9/43	B.H.D: H.E.J. - I.E.K.
c. Gas Laundry	11		B.H.D: R.B.B.
2. PROMOTIONAL PROGRAM			
a. Kitchen Modernizing	8	3/43	B.H.D. - Bob Lowe
3. GAS SALES & INCOME			
a. Load Study (Wartime & Post War Sendouts)	4	3/43	B.H.D: J.W.H.-H.B.C.-H.S.P.
4. MISCELLANEOUS HOME SERVICE			
a. Study of Food Dehydration	1	4/43	B.H.D: A.S.M.-I.E.K.-R.B.B.
5. MARKET STUDY			
a. Apt. House Survey	5		B.H.D: M.J.C.
b. Residential Market Study	3	9/43	B.H.D: M.J.C. - J.G.E.
c. New Bldg. Market Study	2)		B.H.D: J.G.E.
d. Customer Preference Information	2)	9/43	B.H.D: R.B.B.-J.G.E.-I.E.K.
6. MERCHANDISING (APPLIANCES) SALES ALLIES			
a. Heating Contractors	10		B.H.D: H.S.P.
b. Builders & Developers	9		B.H.D: J.G.E.
MISC.			
a. Retail Distribution of Gas Water Htrs.	12		B.H.D: E.F.C

Presented at The New England Gas Association Sales Managers' Conference, Boston, Mass., November 19, 1943.

FOUR REFERENCE SHEETS "B"

Post-War Planning Committee Projects

(Original size 8 1/2" X 11" each)

MANUFACTURE and DISTRIBUTION

	ITEM	DATE	COMMITTEE ASSIGNMENTS	COMPLETED
1.	Developments in Gas Mfg. & Dist.	4/43	A.C.T.: A.B.H.	
2.	Distribution System Study	3/43	A.C.T.:B.H.D. - J.G.E.	

GAS SALES and INCOME

	GAS SALES			
1.	Load Study(Wartime & Post War Sendouts)	3/43	B.H.D.:J.W.H.-H.H.C. -H.S..	
	RATE STUDIES			
1.	Rate Study	9/43	H.E.J.:M.J.C.- B.H.D.	
	NEW LOADS			
1.	Industrial		J.W.H.:	

MARKET STUDY

1.	Industrial Customer Survey	6/43	J.W.H.:	
2.	Commercial Customer Survey	6/43	J.W.H.:H.B.C.	
3.	Apt. House Survey		B.H.D.: M.J.C.	
4.	Residential Market Study	9/43	B.H.D.:M.J.C. - J.G.E.	
5.	New Building Market Study		B.H.D.: J.G.E.	
6.	Air Conditioning (Yr.'Round) Market Study	6/43	H.R.C.: H.S.P.	
7.	Post War Potential Market Information (Con'l)	9/43	H.R.C.:	
8.	Customer Preference Information	9/43	B.H.D.:R.B.B.-J.G.E.- -I.E.K.	

APPLIANCES and EQUIPMENT

	ITEM	DATE	COMMITTEE ASSIGNMENTS	COMPLETED
	APPLIANCE AND EQUIPMENT IMPROVEMENT			
1.	Domestic Appliances (General)	3/43	R.B.B.: B.H.D. - I.E.K.	
2.	Water Htrs. for Commercial Use	3/43	R.B.B.: H.B.C. - E.F.G.	
3.	Commercial Cooking Equip.	9/43	J.W.H.: H.B.C. - R.B.B.	
4.	Gas Kitchen Htg. Range Development	9/43	B.H.D.: H.E.J.	
5.	Dual Oven Range Study	9/43	B.H.D.:H.E.J. - I.E.K.	
6.	Indirect Heaters for Gas Water Htg.		R.B.B.: H.S.P. -	
7.	Humidifiers		H.B.B.:-H.S.P.	
8.	Gas Laundry		B.H.D.: R.B.B.	
	SERVICING and WARRANTY POLICIES			
1.	Free and Charge Service Policies	3/43	R.B.B.:B.H.D.	
2.	Appliance Warranty Policies	3/43	R.B.B.:B.H.D.	

PROMOTIONAL PROGRAM

1.	Post War Delivery Appliance Purchase Plans	3/43	C.W.K.:B.H.D.-R.B.B. -M.J.C.	
2.	Kitchen Modernizing	3/43	B.H.D.: Bob Lowe-	

MERCHANDISING (Appliances)

	ITEM	DATE	COMMITTEE ASSIGNMENTS	COMPLETED
	SALES ALLIES			
1.	Dept., Furniture & Appliance Stores		H.R.C.:B.H.D.-C.W.K. -J.G.E.	
2.	Master Plumbers		H.R.C.: C.W.K. -E.F.G.	
3.	Heating Contractors		B.H.D.: H.B.P.	
4.	Builders & Developers		B.H.D.: -J.G.E.	
	MISC.			
1.	"Economics of Appliance Sales" Study		H.R.C.: F.S.P.	
2.	Financing of Appliance Sales		H.R.C.: M.J.C.	
3.	Retail Distribution of Gas Water Htrs.		B.H.D.: E.F.G.	

COMPETITION

1.	Electric Competition- (General)		C.WK.:B.H.D. -A.S.M.	
2.	Oil Competition- (General)		C.W.K.: E.F.G.-H.B.P.	
3.	Coal Competition- (General)		C.W.K.: E.F.G. -H.S.P.	
4.	Commercial Water Htg. (Competitive Fuels & Rate Study)		J.W.H.: H.B.C. -E.F.G. -H.E.J.	
5.	Propane		J.W.H.	

COMPANY (Internal)

	PERSONNEL			
1.	Hiring Procedures		C.W.K.:M.J.C.-A.S.M. -H.H.C.	
2.	Personnel Training		C.W.K.:M.J.C.-R.B.B. -B.H.D.	
3.	Employee Load Bldg. Bonus Policy		C.W.K.:P.C.P. -R.B.B.	
4.	Employee Appliance Survey		C.W.K.:B.H.D. -J.G.E.	
	MISC.			
1.	Company Paper Work and Routine		R.B.B.:B.H.D.-F.S.P. -J.G.E.	

MISCELLANEOUS

	ITEM	DATE	COMMITTEE ASSIGNMENTS	COMPLETED
	HOME SERVICE PROGRAM			
1.	Study of Food Dehydration	4/43	B.H.D.:A.S.M.-I.E.K. -R.B.B.	6/43
	MISC. STUDIES			
1.	Economics of House heating		H.R.C.:H.S.P. -F.S.P.	
2.	Economics of Main Extensions		H.R.C.: H.E.J.	
	BOTTLED GAS			
1.	Bottled Gas Marketing	3/43	C.W.K.: B.H.D. -A.B.H.	
2.	Converting Bottled Gas Customers	4/43	C.W.K.: R.B.B. -B.H.D.	
	OUTSIDE COMMITTEE TIE-IN A. G. A.			
1.	Gas Kitchen Htg. Committee		H. E. Johnson, member	
2.	Appliance Study Committee		B. H. Dingley, member	
3.	Dual Oven Range Committee			
	A. G. A.			

SALES DEPT. (SPECIAL)

1.	Compensation of Salesmen			
2.	Division of Territories			
3.	Sales Organization			
4.	Sales Plans			
5.	Sales Dept. Income & Cost Estimates			
6.	Appliance Sales and Saturation Figures			

tion to make. As a result, also, the overall planning committee is kept small enough for efficient performance.

As to the planning program itself, this covers practically all phases of company operation. For convenience, we have grouped the individual study projects into the following classifications:

Manufacture and Distribution
Gas Sales and Income
Market Study
Appliances and Equipment
Promotional Program
Merchandising
Competition
Company (Internal)
Miscellaneous
Sales Dept.—(Special)

A copy of the complete list of projects under the above headings is supplied to each of the members of the Planning Committee and subcommittees. This list shows the personnel involved with each subcommittee.

(See reference sheets "B")

In addition, each member of the Planning Committee has a copy of what may be referred to as the Chairman's Control Sheets for each of the subcommittee chairmen. (See reference sheet "C" for sample.)

This carries the same information as the master list but is broken down to indicate the specific projects assigned to each Planning Committee member and which he is responsible for. These sheets also indicate the approximate relative importance of each project, and this serves to act as a guide in allocating time for study. This importance rating is not a rigid one but is flexible—subject to the effect of changing conditions and the control of the chairman. (See reference sheets "D" for sample survey forms used on customer surveys.)

In addition to carrying on his own projects, the Planning Committee Chairman's special responsibilities are:

. . . To secure management and committee agreement on projects, and assign them

. . . to activate and to time control work on assigned projects through sub-committee contact

. . . to effect a coordination in the work of the Committee through occasional regular meetings of the central Planning Committee

. . . to bring about the development of a logical and effective plan of action for the present and the post-war period.

. . . to keep himself and Committee members posted on the work of national and regional planning committees of our industry and to circulate all important literature on the subject of post-war planning.

There are several ways in which the job of post-war planning can be done.

Ours is tailor-made to suit our needs and our type of organization. Under other circumstances and with a different type of organization we might have selected some other procedure. The post war planning on the local company level must be done by the company itself—no one else is going to do the job. Only through such local efforts complementing the work of our national and regional association committees can a complete industry job be done.

Recently one of our Committee members came in with what he called a new definition for post-war planning—"Post-war planning is doing today what you should have done five years ago." Well, maybe this may suggest something to us. If we eliminate the "Post-War" and just call it our "Planning Program," many of us may see the wisdom of continuing such business preparations and planning without the necessity of a war to spur us on.

Howard R. Carlson, Chairman
Post-War Planning Committee
The Hartford Gas Company

REFERENCE SHEETS "D" The Hartford Gas Company
(Original size 8 1/2" X 11" each)

HOTEL and RESTAURANT SURVEY

Name_____ Address_____ Classification_____

PERSONNEL (1" number)
Name_____ Title_____
Name_____ Title_____
Name_____ Title_____

Equipment Survey

EQUIPMENT	FUEL GAS	ELEC.	OIL	COAL	DEMAND	APPROX. REPL. DATE	REMARKS	*
Ranges								
Broilers								
Roasting Ovens								
Fryers								
Conf. Stoves								
Bake Ovens								
Stock Kettles								
Vegetable Steamers								
Warming Closets								
Steam Tables								
Sterilizers								
Coffee Urns								
Water Urns								
Griddles								
Hot Plates								
Toasters								
Refrigerators								
Steam Generator								
Water Heating								
Space Heating								
Summer Cooling								

Does Owner Supply Heat? Approx. Sq. Ft. Area
Is Central Heat Supplied?
Is Present Heating System Adequate?
Size of Gas Service
Is Utilization of Gas Satisfactory?
Annual M.C.F. Gas Use: 1942 Average No. of Meals Served Per Mo.
*A. P. G. U.
Date Checked – By

INDUSTRIAL SURVEY

Name_____ Address_____ Classification_____

PERSONNEL
Name_____ Position_____
Name_____ Position_____
Name_____ Position_____
Name_____ Position_____
Name_____ Position_____
Name_____ Position_____

HEAT OPERATION DATA

HEAT OPERATION	FURNACES NO.	TYPE	FUEL GAS	ELEC.	OIL	COAL	DEMAND	APPROX. REPL. DATE	REMARKS	*

The Fear of Peace

By

Frank H. Adams,

Chairman Post-War Planning Committee, Association of Gas Appliance & Equipment Manufacturers: Vice President and General Manager, Surface Combustion, Toledo, Ohio.

FRANK H. ADAMS

YOUR General Sessions Program Chairman, Mr. Wrench, asked me to talk to you on "Gas Appliance Manufacture and Promotion After the War." I spoke on this subject before the Association at the Cincinnati meeting last April. Nothing has occurred since to alter my opinions on the need of coordinated planning, the mutual problems of the utilities and manufacturers, the solution of our manufacturing and marketing problems.

It would be a fairly simple matter to discuss this subject more in detail if we could see today any more clearly than heretofore the end of all war or final "V" Day and the environment in which business would operate. But I am not so concerned *today* with the long range, after "V" Day problems of manufacturing and distribution, as I am with *our ability to recognize the periods* for which we must plan *and the early completion of "plans of action" for these periods as they arrive.* I'm more concerned *now* with what action we as an industry will talk *when Hitler is beaten* than I am in what we will be doing *six months* after the war ends with Japan. I am more interested in our conception of the basic problems present *today* and with which we must deal *today* and in the various periods of transition from war to peace than I am in a modified, polished-up, pre-war version of distribution, or even the most complete, well conceived plan than can function successfully *only* a year after final peace is won.

It appears to me that there are two simple and self-evident truths that we as an industry must recognize now, which justify the immediate formulation of clear cut, effective action.

First:—That millions of people fear peace: Men and women in our armed forces, anxious as they are to finish the war and live in peace, fear it; millions employed in various government bureaus and war production plants fear peace; small business, big business, government, politicians, captains of industry, are concerned about the problems of peace, because we can not now see the formula of a practical, durable peace. It is up to us as a part of business management to face the problems of peace and help eliminate these fears.

Second:—That Global War Will not end on one day. Eventually there will be a day which we will call "V" Day, or "D" Day, but this in all probability will be preceded by an end of European hostilities, reduction in the demand for war goods, a partial transition to peacetime production, certain limitations lifted, and some consumer durable goods flowing into the homes of your customers.

Perhaps we do not like to admit this anxiety over the problems of peace. It may be expressed or repressed. For example, *what would you do if the war with Germany ended today?* What is your immediate reaction? We are beset by two extremes of thought and emotion. On the one hand we have the burden of the worry and hatred of war and destruction; the desire to eliminate these worries—the desire for peace. On the other hand is the anxiety over the problems of peace, the problems of readjustment, the conditions under which we may be required to do business. These conflicting thoughts and emotions preclude clear thinking and vision of what to do. This confusion is likely to checkmate definite, practical action in the periods of transition.

Industry, of which the utility and manufacturer of gas appliances and equipment are a part, looks with anxiety on the restrictions placed on its economic liberties, the syphoning off of not only wartime profits but capital reserves considered essential to reconversion, maximum peacetime production and employment; the possibility of inflation and its disastrous results; the menace of a 200 billion dollar national debt, the tentacles of bureaucracy and their possible continuation to control our postwar economic environment. Specifically, we view with concern the possibility of government ownership, forcing down of rates to an unprofitable level, more and bigger T.V.A.'s, the elimination of merchandise profits, and the expedient and politically wise advantage which may be given to competitive fuels, the withholding of materials and the unnecessary continuation of gas limitations. It is not too early for Gas Industry Management to request from government a declaration of policy on these matters, so that in making our plans for increased employment when peace is won we will not have these questions to confound us and make our planning a mere matter of motion—arriving nowhere.

I agree with Mr. Ruthenburg, that *we must strive for a fifth freedom—the freedom of opportunity*—the opportunity and the means to expand and develop and create jobs, the freedom of choice of employer and employee. If we want to be free we must plan individually and act freely. We must justify confidence through the restoration of confidence. Government, now our biggest customer, threatens to become our biggest competitor. It has entered more and more into business; therefore, business must enter more and more into government and take a more active part—make of it an ally. Government should be the partner of business, not the liquidator. The direction and formulation of postwar planning for the gas industry should remain in the hands of its management—you and others directly concerned with the future of your own enterprises. You may want and need government in an advisory and regulatory capacity but not as sole arbiter.

To justify this position, to remain a part of private enterprise, our industry must among many other things base our planning on the broad prob-

lems of readjustment looking beyond the mere satisfaction of our own needs. As Mr. Arthur Hood so ably stated in his "Fourth House of Democracy"—

> **"Environmental planning by private enterprise does not mean total economic planning, but it is planning for as much environmental freedom for private enterprise as can be found consistent with the general welfare.**
> **"To achieve this we must attain a scientific impersonal objectivity in our approach to a problem, together with sufficient disinterestedness to adjust our personal welfare to the general good."**

In making these statements, I fully appreciate that much has been written and spoken on these generalities and the broad phases of our postwar readjustment. Some may have criticized those authors who continue to reiterate these problems. But to me, they are basic problems which we cannot afford to ignore. They are the nuts and bolts that bind our own individual plans to our national recovery and economic stability.

None of the high objectives of the C.E.D., and the N.A.M., and other organizations working and planning in the interest of full employment, maintenance of incomes, proper environment, etc., can be attained until you and I, and all the other thousands of persons representing management of individual businesses, not only embrace the need of individual company planning, *but produce and have available for immediate application our plans for action as the progressive periods of transition occur.*

Then, and not until then will confidence in the future of private enterprise be fully established. Then industry will create its own environment, which must be conducive to a continuation of the principles essential to its survival and the contribution it can make to a new, better, braver America.

Nearly everyone is planning—business is, government is—yes, even the individual is planning. But the failure to complete and represent to our people be they present or future employees or constituents of government, *specific blueprints of action for the transitory periods* unquestionably creates doubt and uncertainty of the future. And the uncertainty of the future policy and action of government, of markets to absorb the vast productive capacity by which we have created full employment and high levels of income are inhibiting factors in the completion of definite action plans. There may be other retarding factors which we *should recognize* and *take steps to eliminate,* such as:

(a) **Complacency—The feeling that markets will be automatic, that demand will far exceed supply until we are well into the final postwar period. There will be no automatic market for gas equipment. We have no monopoly on the market. We must create a demand for our goods and services.**

(b) **Waiting for government initiative. Total war necessitates a dependence upon government control and direction. Looking to Washington becomes a habit. Unless this habit of dependence is broken our initiative and freedom of action become paralyzed. We may slide out of war production into civilian production just as we slide out of civilian into war production, but we should bear in mind that the slide was greased with government funds, government pressure and the necessity of national survival. The return will be sanded with all the maladjustments of peace. Private enterprise must supply the pressure and initiative.**

(c) **The apprehension of an uncharted course—the magnitude of the job. There is no precedent to follow—no experience on which to draw for guidance. In the words of Herbert Hoover, "We need to think out economic reconstruction. We must think out the recovery of freedom, and that preparedness can come only from organized objective research and public debate. It must come from many sources and many places and not from government alone."**

(d) **Confusion—caused by great social and economic changes; by the discontinuance of our normal business activities; by our inability to sift from the volumes of materials and ideas available those applicable to our own particular problem; the inability to find a starting point—to prepare a framework of what to do and when to do it.**
We must look through our bifocals and bring the long range and short range problems into focus.

Everyone here accepts planning as essential. Most of us have proceeded to a greater or lesser degree within our own companies. But *it is not the importance of planning itself I wish to stress—that would be anti-climax. It is the need of having completed our timetable of action and knowing what and when and how these recovery plans are to be set in motion that I wish to emphasize today.*

To wait until the war ends before completing post-war development and marketing plans or taking definite action to reestablish distribution, even though man power and opportunities may be limited, may not of itself have any direct effect on earnings, or the ultimate position the company would occupy in long range recovery. But to ignore the need of taking immediate action as soon as conditions permit would slow down reconversion, retard recovery, create unnecessary, though temporary, unemployment. Our responsibility to free enterprise is in doing everything within our power to bring about a smooth, quick change-over with as little interruption as possible in our economic progress.

I fully appreciate that postwar planning to be successful must look for its development and direction to at least two main divisions of a company. *The responsibility of long range operating and economic environmental planning must of necessity remain the problem of top management. So must the specific orders, or the go-ahead be given to develop plans for certain periods according to the needs of your own time-table.* The development of merchandising plans must of course be the responsibility of Sales Divisions. Having spoken of the peripheral factors, let us consider those most immediately applicable to our sales activity.

In my opinion I believe there are three essential and important things for us to do as soon as we get back home to our desks—three starting points for the development of immediate down-to-earth action plans:

> **First: Set up a tentative time-table.**
> **Second: Start the job of customer conditioning.**
> **Third: Complete as soon as possible your sales plans for the post-Hitler pre-"V" Day period.**

Before we can definitely establish a time-table or determine the action to be taken in each of the transitory periods we must make some assumptions about the war and the peace. So, let us for the purpose of blueprinting the plans for action, make these assumptions:

1. The United Nations will for the present concentrate on the defeat of Germany. That accomplished we and our allies will drive for an early victory over Japan.
2. Total war will continue against both Axis partners until we obtain unconditional surrender.
3. Germany will be defeated at some time in 1944.
4. There will be an interim period of not less than one year and not more than two years be

tween the fall of Germany and the defeat of Japan.

5. Prior to and during this period some material will be released for the production of consumer goods. The demands of heavy industries for war materials will have declined. Even if we continue to Lend-Lease materials for the reconstruction of Europe, there should be a surplus of iron, steel, and other materials required for the manufacture of gas equipment.
6. During the Post-Hitler pre-"V" Day period we can not count too heavily on the lifting of all gas limitations, the resumption of residential construction, adequate manpower nor proper psychological conditions, a sufficiency of new gas appliances, and equipment to justify an all-out sales activity, or the establishment and setting in motion of permanent sales plans and policies.

On these assumptions our sales departments might establish a timetable of action and some of the most important merchandising steps to be taken in each period, as follows:

1. "Get-Set" Period: 1943-'44

Start the job of customer conditioning:—make gas equipment and service the No. 1 item on your customers' postwar shopping list.

Survey the dealer situation to determine how many will be available and how they may be rehabilitated.

Teach future buyers to be realistic about postwar products. Start a counter "dream merchandise" educational and publicity activity. Make people realize that you can't get all the new ideas right away as soon as Hitler is licked, or even when Japan is beaten; that new materials and wartime technological developments will be utilized as soon as practical, but the "bugs" prevalent in most new products must be taken out.

This does not remove the obligation nor the necessity of being progressive, alert to the adaptation of new materials, or technological developments. We must be realistic and convey this realistic impression to our public. The exponents of dream merchandise propaganda are now defending their position on the theory that getting people to wait for new radically different products will hold back "V" Day lust to buy and serve as a hedge to postwar inflation. Nothing could be more unsound in its conception. Hesitancy to buy—to hold a deferred market in deferment will destroy the very foundation on which we must base a return to civilian production and full employment. And if the public does expect too much, this impression can not only retard the purchase of gas equipment but hold up recovery, encourage purchase of more easily modified or non-mechanical products, thereby limiting the postwar sales opportunity of the gas industry.

This Get-Set Period is the time to complete Post-Hitler pre-"V" Day merchandising plans. They may have no permanence but will serve as a worthy expedient to meet temporary conditions. Your time-table may have to be changed due to unpredictable conditions and factors beyond control, but the practicability of being prepared will not have been altered nor the necessity of quick action eliminated. Unless your sales plans are complete and approved, valuable time will be lost in the following crucial period.

2. Go-Ahead Period—Defeat of Germany, 1944—Time to put your Post-Hitler sales plans in motion for the retention of favorable marketing position; time to establish bridgeheads for an all out peacetime activity; time to put a sales task force in the field, made up of men and women now employed within your own organization, to establish contacts on best prospects taken from equipment and consumer opinion surveys now being made. This task force will crystallize consumer preferance, secure orders and commitments for equipment as soon as it is available, build a backlog of prospects on which new salesmen employed from the ranks of our armed forces may call after "V" Day. For a more complete outline on which to establish this plan, I refer you to "The Return to Selling," in the October Digest of Marketing.

3. The Acceleration Period—Defeat of Japan—1945 or 1946

Beginning of another period of readjustment, the setting in motion of plans and principles which will in the year or two following become established long range activities. These will carry us through to the

4. True Peacetime Period—

When peacetime selling conditions can be accurately determined, definite, long range policies adopted, permanent, hard-hitting sales organizations operating, outstanding equipment changes realized, and new sales records established.

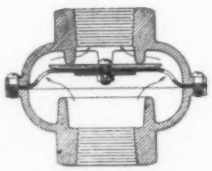
This outline of the steps to be taken in preparation for the job immediately ahead of us is not sufficiently broad in its concept for application to meet the marketing period after "V" Day. But if these suggestions are put into effect they will help us to reconvert rapidly, utilize our present and available man power, establish a preference for our goods and services, and help us to play our part as good citizens in speeding national peacetime recovery.

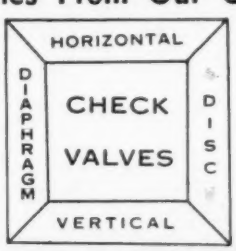
With each new military success the time grows shorter when aggressive action will be necessary. Unless simple, practical steps are taken *now*, we may come to the end of the war with Germany, and perhaps even to final "V" Day without a definite plan of action and our decisions and actions taken then will be matters of expediency.

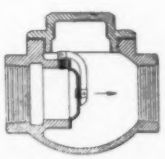
We need action plans now.
Industry needs action plans now.
America needs action plans now.

When these are completed and coordinated, *there will be no fear of peace.*

Prompt Deliveries From Our Own Factory







NORWALK VALVE COMPANY

85 Spring St. South Norwalk, Conn.

Butane-Air Gas Stand-By Plant at Chattanooga, Tennessee

By

O. F. Reynolds

Chattanooga Gas Co.
Chattanooga, Tenn.

BACK in 1930, our company constructed one of the first butane-air gas plants in the United States at Cleveland, Tennessee. At that time the petroleum industry was seeking markets for butane which was a by-product of the manufacture of natural gasoline. It was about this time also that they were beginning to recover butane from refinery gases and there was soon more butane available than the market could absorb.

When the petroleum industry sought markets in the field of industrial heating, the gas industry, in order to protect this field from invasion, sought means of using butane to create a market. Gas companies first began using it as an enricher in the manufacture of carburetted water gas and then became interested in using it to serve small communities because of the low investment in plant capacity. There quickly followed a wave of construction of butane-air plants in small communities all over the country.

The abnormal war conditions of the past year or two have opened up still another field in which the butane-air gas plant has found a definite place. We refer to the problem of meeting peak loads which has had to be solved by so many gas companies whose sendouts have increased by leaps and bounds as a result of the tremendous increase in war production. We in Chattanooga were faced with this problem in the summer of 1942, as, no doubt, were many of the companies represented by this group present here today.

When it became apparent that we must provide stand-by production capacity to meet the prospective peak loads of the winter of 1942-43, we decided to install a butane-air gas plant. We decided on this type plant for two principal reasons. In the first place, the investment would be a minimum, and, of course, we could not afford to invest any more than absolutely necessary in equipment that we would probably have no need for after the war emergency. In the second place, we needed a plant that could be placed in operation on short notice since our ratio of storage capacity to maximum day was dangerously low, and our hourly load was so variable. In addition to these two reasons, we also found that our estimated peak sendout was such that we could supply the contemplated shortage with butane-air gas without changing the specific gravity and burning characteristics of our gas enough to cause any trouble. According to the American Gas Association Mixed Gas Research Data, we were permitted to mix up to 20% of 500 Btu butane-air gas with our 510 Btu by-product coke-oven gas without causing any burner trouble.

In the light of these facts we installed a plant with a maximum production capacity of 40,000 cubic feet of 500 Btu gas per hour or approximately 1,000,000 cubic feet per day. The maximum production capacity of the by-products coke-oven plant, which is our regular source of supply, is 240,000 cubic feet per hour.

There were two factors that influenced very largely our plant design. The first of these factors was the difficulty of securing certain types of equipment and material due to their scarcity as well as the War Production Board restrictions existing at the time. For instance we were forced to use an old steam driven compressor because it was next to impossible at that stage of the war production effort to purchase a new one. In fact, we were fortunate to secure even this old steam driven one on loan from the coke oven plant.

This compressor necessitated our using steam which we also purchase from the coke plant. Furthermore, the use of steam made it necessary to locate the plant adjacent to the coke oven property and as close to their boiler room as possible.

The second factor influencing the plant design was that conditions at the coke plant prevented our introducing the butane-air gas on the suction side of their compressors, which deliver us our gas at a pressure up to 30 pounds. Since their compressor capacity would take care of another 40,000 cubic feet per hour we had hoped to introduce the butane-air gas ahead of their purifiers which would insure thorough mixing with the coke oven gas and make a very simple installation. In this kind of application we would have used a simple high pressure industrial-burner-type inspirator and introduced the mixture into their system against the low pressure without resorting to the use of a compressor. The principal reason that we were not permitted to do this was that the coke plant had experienced a serious accident with butane the previous winter when they were using it to heat up a new battery of ovens. This accident cost the life of one of their employees and as a result they refused to permit the use of butane on their property. We were therefore forced to introduce the butane-air mixture into our mains against a pressure of 25 to 30 pounds.

Our stand-by plant is located approximately 800 feet from the boiler plant which necessitated running of an underground steam line of that length. The gas is delivered through about 500 feet of 4" line to the 12" high pressure city main just as it leaves the coke plant property. The compressor speed is manually regulated with a 2" steam valve. We have a gas pressure line connecting with the 12" city main and a gauge near the compressor to permit the operator to know at all times what pressure is being maintained by the coke plant compressors. This, together with the fact that the steam pressure is maintained at a fairly constant figure, makes it quite easy to regulate the compressor speed. We found it unnecessary to provide a by-pass on the compressor to get the regulation we required.

For vaporizing the butane we use the standard vaporizeer set-up recommended by the Liquified Petroleum Industry and which conforms to the standards of the National Board of Fire Underwriters. It is a high pressure, counter-flow tube type heat exchanger in which the liquid and vapor flow upward around the tubes

and the heating medium flows downward through the tubes. We use steam as the heating medium.

The butane liquid enters the plant from the storage tanks under its own vapor pressure. At the inlet of the vaporizer the pressure is reduced to 10 pounds by a liquid regulator. The vapor leaves the top of the vaporizer and passes through a pressure regulator which reduces the pressure to around 16″ water column. From there it flows to the automatic butane-air proportioning machine. The vaporizer is provided with a pressure relief valve set to open at 80 pounds and the vapor line at the outlet of the vapor pressure regulator has one set to discharge at 5 pounds. We use Bastian-Blessing relief valves and safety devices throughout the plant.

In our plant the automatic proportioning is accomplished by use of a Kemp #8 Series "S" Industrial Carburettor without the turbo-compressor. This machine has a rated capacity of 30,000 cubic feet of mixture per hour, but we have found that it will easily deliver our maximium requirements of 40,000 cubic feet per hour. The Kemp carburettor is a sliding valve mechanism which is actuated by the compressor suction operating on a large diaphragm attached to the valve.

The ratio of air and butane port openings can be adjusted by a movement of the valve endwise to produce the required mixture. The rate of delivery is automatically taken care of by the sidewise movement of the valve in response to the compressor suction, the ratio of air and butane port areas remaining constant. The air is taken in from the outside through an air filter. The vapor pressure is reduced to 1½″ water column by a dead weight regulator at the inlet of the carburettor.

We have also provided for emergency proportioning a Surface Combustion high pressure industrial burner inspirator, which is installed in the compressor suction line between the outlet of the carburettor and the surge tank.

We control the mixture of our sendout gas by continuously checking the heating valve with a Caloroptic BTU indicator. This instrument is made by the Connelly Iron Sponge & Governor Company.

We have two 15,600 gallon water capacity storage tanks which permit the storage of approximately 28,000 gallons of butane. The underwriters regulations restrict the filling of liquefied petroleum storage tanks by setting the maximum filling density which cannot be exceeded. Filling density is defined as the ratio of weight of the butane to the maximum weight of water the tank will hold. In the case of commercial butane the filling density is set at approximately 50%, which means our tanks cannot be filled to over 90%, of capacity. This amount of storage provides us a maximum manufacturing capacity of 5,600,000 cubic feet of 500 BTU butane-air mixture. One of our tanks is a new one designed for 80 pounds working pressure, but the other is a used one designed for only 60 pounds working pressure. The underwriters standards require such tanks to be designed for 80 pounds, but we were unable to purchase two new tanks of this type because of the war emergency conditions.

All connections and safety devices are installed in the manhole covers of these tanks. Each tank is equipped with four 2″ relief valves with a total effective relief area of 8 square inches. The 2½″ inlet and outlet connections are provided with excess flow valves rated to close at 60 gallons per minute and the pressure gauge connections are equipped with ball check valves. For gauging the tanks we use a slip-tube liquid level gauge rather than the conventional gauge glass because we believe it is more accurate and eliminates trouble from breakage of glass. With the gauge glass there is under certain conditions a boiling action of the butane which causes such a fluctuation of level as to make an accurate reading impossible to secure.

In connection with the storage tanks we might mention that we had some trouble with the safety relief valves "blowing" on hot days this past summer. With a tank filled to within a short distance of the top the direct rays of the sun will cause the vapor pressure to exceed the 80 pounds at which the relief valves are set to discharge. It was necessary to use water to cool down the tanks sufficiently to keep the vapor pressure under 80 pounds.

We did not feel that in a stand-by plant of this kind the investment in meters to measure either the butane vapor or the sendout gas was justified and did not include them in the installation. We arrive at our sendout for any operating period by gauging the storage tanks and calculating the amount of gas manufactured on the basis of 5 gallons of butane per MCF.

The cost of our plant was approximately $11,700. This amount includes the construction of a small concrete block building which it was necessary to build to house the equipment, but it does not include the cost of the compressor or vaporizing equipment which were loaned to us by the coke oven plant.

Had we purchased the vaporizer equipment complete with all safety devices and regulators the cost would have been increased by about $600. If we add to this figure also the cost of the compressor which could have been purchased for $2,000, the total investment would have been $14,300.

It was necessary to use the plant on five peak days the past heating season and the operation was very satisfactory. There are some points about the operation of such a plant that we might mention from our experience thus far. The question of operating hazards might be raised by some. It is our opinion that they are no greater than those existing in other types of gas plants. There is one property of butane which it is well to recognize in this connection, however. Butane vapor is approximately twice as heavy as air and in case of large leaks it is apt to accumulate along the floor where it may be unnoticed for some time and thus create a hazard. Closely related to this point is the fact that it is very difficult to eliminate leaks entirely where screw pipe joints are used. This is because of the solvent action of butane on ordinary materials used for pipe thread compound. A thread compound that is not affected by butane is one made of litharge and glycerine which we used in our plant and found to hold well. Ordinary rubber gasket material will quickly deteriorate under the action of butane also, and it is necessary to use a special material for all flange connections. It is also very diffcult to get valves to give 100% shut-off of butane, but we have used Merco-Nordstrum cocks with special lubricant with good results.

There is one phase of the operation of the plant which must be watched very closely and that is the vaporization of the butane. If the flow of liquid butane into the vaporizer exceeds the rate of vaporization the liquid will completely fill the vaporizer and quickly over-flow into the carburettor. If not promptly detected the liquid may even be pulled through the surge tank into the compressor where it may cause considerable damage. Fortunately there is one warning sign that gives the operator immediate notice of this condition and that is the appearance of frost on the pipes and equipment as the liquid enters. There is now on

the market a liquid level controller designed to prevent the overflowing of the vaporizer, and we are advised that it is quite dependable. It is manufactured by the Fischer Regulator Company of Marshalltown, Iowa.

In conclusion, we would say that the butane-air gas plant was the answer to our particular problem of providing stand-by capacity in Chattanoooga. It was a more or less temporary measure taken to meet an abnormal increase in load caused by the war production effort and was not intended as a long range addition to our system. Since a large percentage of our load is industrial and includes some large plants whose demands for gas will drop off considerably after the war, we do not anticipate the need of a stand-by plant then. For this reason we gave very little thought to the question of availability of butane over a period of years. This factor must be taken into consideration by anyone contemplating the construction of a butane-air plant at this time, however.

There are many factors entering into the consideration of the availability of butane in the future and the answer, no doubt, depends upon developments which cannot be predicted with certainty. Certainly we do not feel competent to even hazard a guess that would be of any value to any one contemplating the installation of a butane-air gas plant. Neither have we been able to get those in the petroleum industry to give any assurance of the availability of butane in the next few years. However, with the rapidly increasing use of liquified petroleum gases in the manufacture of synthetic rubber the natural assumption is that there will be a shortage of these gases in the next few years.

As a matter of fact the supply of butane for use in gas plants is already becoming critical and the rapidly expanding synthetic rubber industry will be making increased demands in the future. Furthermore, the production of petroleum is a maximum at this time and we are told our reserves are rapidly being depleted. In the light of these facts we personally feel that the outlook for butane as a gas plant stand-by fuel is not very bright.

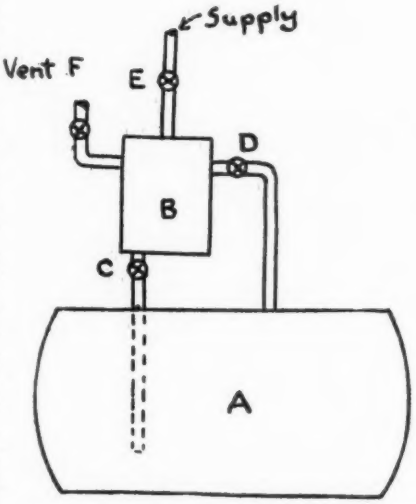
Presented at Annual Meeting of the Florida-South Georgia Gas Meters Association, Gainesville, Florida, November 6, 1943.

How to Feed A Boiler Without A Pump or Injector

By
W. F. Schaphorst, M.E.
Newark, N. J.

This sketch shows how water can be fed into a boiler under pressure without the use of a pump or injector of any kind.

"A" is the boiler that is to be fed. "B" is a tank or vessel capable of withstanding the steam pressure of the boiler itself. Close valves C and D and open valve E and vent F so that tank B will fill with water through the supply pipe. Then close valves E and F and open valves C and D. Steam will enter B through the valve D and the water from B will flow downward through C due to gravity because the vessel B is now nothing more or less than a part of A, and, since water naturally seeks its level in pressure vessels as well as in the open atmosphere, it will flow downward, B will empty and the water level in A will be raised. After B is empty close C and D again and open E and F and repeat the above process.



It is well to note in this connection, however, that some steam is required to do this work. When all of the water is emptied out of B that vessel is full of steam, hence the volume of steam used is equal to the volume of water fed into the boiler. It is therefore a simple matter to compute, roughly, the amount of steam required to feed a given quantity of water into a boiler with this apparatus.

Correspondence

Editor, American Gas Journal
Dear Sir:

On page 57 of the October, 1943, issue of the AMERICAN GAS JOURNAL is an article entitled "How Gas Companies May Avoid Liability for Explosion Injuries." The object of the article, as explained in its second paragraph, is to convey dependable legal information about what the complaining party must prove. I agree that this object is a worthy one. On page 58, under the sub-heading "City and Gas Company Liable," and under a case title which (incorrectly) indicates that the gas company was not a defendant, it is stated that the testimony showed the following conditions:

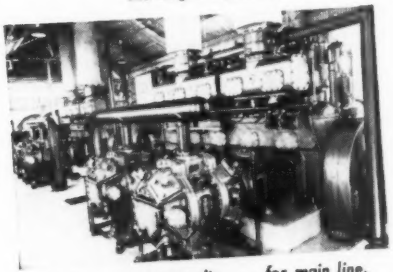
"For two years the neighbors had smelled escaping gas and had notified the gas company. The last notification was three days before the explosions. The gas company did not try to locate the leak. It did not repair its leaking main or shut off the gas."

This statement of what the testimony showed is inaccurate and misleading. The testimony showed, as well, (1) that every gas leak complaint received had been promptly visited and attended to, (2) that in the east end of the same block within a year preceding the explosion, the gas company had rerouted a long section of main, after its security, involving no gas leak, had been threatened by a cave-in caused by leaking water, and (3) that gas was not smelled in the houses in which the explosion took place until ten minutes before the explosions.

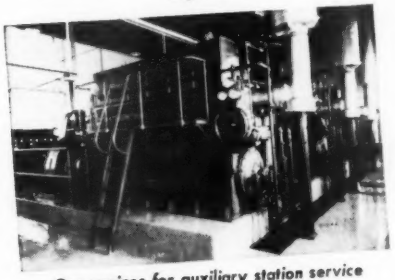
I write this letter neither to describe conditions and events prior to the accident, nor to summarize the testimony concerning it. My sole object is to point out that your article draws a picture of our company's service to the public as one of indifference and neglect, from a non-legal standpoint as well as a legal one. As this picture is not the correct one, I am sure you will agree that the false idea of our service should be dispelled.

Very truly yours
Hudson W. Reed, President
The Philadelphia Gas Works Co.
November 26th, 1943

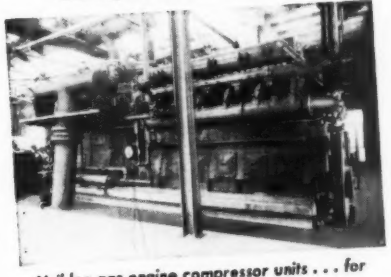
Horizontal double-acting compressor units . . . for heavy duty main line service in the larger capacities



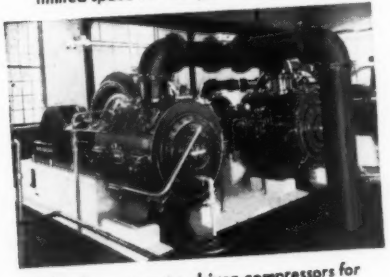
Angle compressor units . . . for main line, booster and distribution service, in medium capacities



Gas engines for auxiliary station service



Unibloc gas engine compressor units . . . for limited space . . . for gas distribution service



Synchronous motor driven compressors for city gas distribution

From Field to Market

WORTHINGTON

EQUIPMENT FOR THE GAS INDUSTRY

for

MAIN LINE
BOOSTER
DISTRIBUTION
POWER GENERATION

HORIZONTAL DOUBLE-ACTING GAS ENGINE-COMPRESSORS
for heavy duty main line service in the larger capacities

ANGLE GAS ENGINE-COMPRESSORS
for main line, booster and distribution service, in medium capacities

VERTICAL CONVERTIBLE GAS-DIESEL ENGINES
for auxiliary station power service

UNIBLOC GAS ENGINE-COMPRESSORS
for limited space, for gas distribution service

OPPOSED TYPE MOTOR-DRIVEN GAS BOOSTER COMPRESSORS
design gives minimum shaking forces, for bad soil conditions

DUPLEX SYNCHRONOUS MOTOR-DRIVEN COMPRESSORS
for gas distribution service

Thousands of horsepower of Worthington compressors are now carrying vital parts of the United Nations' war production load.

GC3-5

WORTHINGTON

WORTHINGTON PUMP AND MACHINERY CORPORATION • HARRISON, NEW JERSEY

OFFICES AND REPRESENTATIVES IN ALL PRINCIPAL CITIES

THE MAGIC FLAME

will cool and heat your home of tomorrow

What kind of climate do you like? In the bright world of tomorrow, you will be able to "make it to order" indoors—year round.

That is the promise of Servel's flame of magic.

Today, this flame is bringing silent, trouble-free refrigeration to more than 2,000,000 American homes—and to our armed forces all over the world.

When peace returns—and Servel is "mustered out" of total war work—millions more will be able to enjoy not only *this* modern convenience, but *new* ones made possible by the magic of the flame.

The Servel *All-Year* Gas Air Conditioner is one of them. Servel research engineers developed it before war came. It will be ready for you at war's end. This new and different unit will cool your house in summer, heat it in winter, ventilate it through every season.

Servel gas refrigerators and *all-year* gas air conditioners and new home appliances will mean greater comfort—better living—for you and your family. And they will also mean *jobs*—good jobs—for our fighting men when they come home again.

SERVEL, Inc.

America's Leading Makers
of Modern Gas Appliances

Dramatizing the modernity of gas...

and its promise for the post-war world

The advertisement on the opposite page sounds the keynote of Servel's advertising plans for 1944. It tells the story of the greater convenience . . . better living . . . promised by Gas in the bright world of the future.

The modernity of gas is already known to millions who own gas refrigerators. But these and millions more must be told of the new future for gas, and what it will mean to them. It's an exhilarating story of startling improvements in gas equipment . . . of new and different gas appliances . . . of exciting things to come . . . such as Gas *All-Year* Air Conditioning.

During the coming year Servel advertising will dramatize this story for your customers, help to keep the modernity of gas and gas appliances foremost in the public mind.

Servel, Inc.

Deposit Contracts of Public Utilities

By
Fred A. Herr

THE CALIFORNIA Railroad Commission has issued new regulations designed to relieve the burden under which gas utility firms have suffered by reason of war-imposed conditions which have aggravated the execution of deposit contracts.

In taking this action, the commission recognized that war-generated limitations due to material shortages have greatly hampered both the construction of new residences and the extension of lines, mains and services. It took cognizance, also, of the fact that these conditions have prevented and will probably continue to prevent the connection of new customers to line, main and service extensions upon which advance deposits have been made. In the interest of equity, the decision stated, the commission deemed it necessary to extend the term of such deposit contracts.

Relief to the utilities operating with deposit contracts, including water, electric and telephone companies as well as gas firms, was granted under Fourth Supplemental Order which was issued after the conclusion of public hearings in Los Angeles and San Francisco and provides that:

I. **All gas, electric, telephone and water utilities having advance deposit contracts covering ordinary line or main extensions or extensions to real estate subdivisions, where refund provisions of said contracts had not expired prior to Dec. 7, 1941, shall file. to become effective on or before Sept. 1, 1943, an Emergency Rule and Regulation No. A-2. Said filing shall be by advice letter as provided by General Order No. 96.**

II. **On or before Oct. 1, 1943, each utility shall notify the other party or parties to the contract of the provisions of the rule, and shall make such additional refunds as may have accrued under the rule since Dec. 7, 1941.**

III. **In all other respects, the presently filed extension rules and contracts thereunder remain in full force and effect.**

IV. **All utilities not having contracts which will be affected thereby, and therefore not required to file Emergency Rule and Regulation No. A-2, as ordered in Part I hereof, shall so advise the Commission by letter.**

Emergency Rule and Regulation A-2 provides that the time limits of refund provisions of all advance deposits covering lines, mains and services, made by contract under extension rules applicable to ordinary extensions and extensions to real estate subdivisions, are extended as follows:

(a) ... Contracts entered into prior to Dec. 7, 1941, where the refund time limits had not expired prior to Dec. 7, 1941, are modified to provide an extension of the time limit for refund of unrefunded advance deposits by a time period equal to the time interval between Dec. 7, 1941, and a period of six months following cessation of hostilities in the present armed conflict with Germany, Italy and Japan, provided such extension of time shall not exceed five years.

(b) ... Contracts entered into subsequent to Dec. 7, 1941, but before the cessation of hostilities, will have refund provisions extended in the same manner as (a), except, that the term of extension will be measured from the date of the contract, instead of from Dec. 7, 1941.

(c) ...Contracts where the refund period terminated prior to Dec. 7, 1941, are not modified in any manner by this rule.

(d) ... Should it become necessary to replace in excess of 50% of a line or main covered by a particular contract at any time subsequent to the original time limit for refunds thereunder, the time extension provided otherwise by this rule shall be terminated as of the date said replacements became necessary.

The utilities were also enjoined by the CRC to include one or more of the following conditions if applicable to their contracts:

That provisions of the rule will not apply to contracts entered into for service to military establishments or war industries, nor to defense housing projects, where such projects are of temporary construction, subject to removal at the termination of the war; that the provisions of the rule shall not apply to contracts for service extensions to temporary or speculative projects, such as gold mines, when activities have been curtailed because of governmental orders.

Time limits for refund based on a combination of a percentage or gross revenue and new customers or customers' load attached are not extended under the rule in so far as based on a percentage applicable to gross revenue derived from the original applicants.

Southern California Gas Co. and Southern Counties Gas Co., both having headquarters in Los Angeles, were granted special permission, under a decision handed down October 19, to wait 60 days beyond the date of October 1 set forth in Fourth Supplemental Order before notifying the parties of the second part to their deposit contracts, as provided in Part II of the order.

In its decision No. 36528, through which the order was placed in effect, the CRC pointed out that there are numerous contracts now effective governing extensions of utility service, which cover deposits refundable in whole or in part over varying periods of time, circumstances and methods.

Testimony at the hearings developed that utilities generally are agreeable to an extension of the time periods for making refunds, in view of the unusual conditions brought on by the war.

Because of the large number of contracts and the varying conditions thereof, the commission considered it advisable to include in its decision an outline of certain basic principles of the purpose sought to be accomplished, to the end that the emergency rule may be administered in harmony therewith in respect to the many varying and individual contract conditions.

The C.R.C. set forth that the emergency rule is based on the following principles:

That the rule may not be so construed that, in application, it will operate so to modify any given contract as to render it less favorable to the customer or depositor if the rule had not been adopted.

That the rule is not to be construed as requiring the utility to repay more than the total of the advance, unless so provided in the contract prior to the adoption of the rule.

That since Dec. 7, 1941, may be deemed to mark the entry of this nation into a concentrated war effort, that date has been adopted for the purpose of the rule.

That extension contracts in which the refund period expired prior to

Fundamentals never change...

The successful farmer knows the value of lubrication. So do the users of plug valves. Unless a valve is provided with a positive means of lubrication to prevent entrance of deteriorating elements, life of a valve is shortened. Years ago industry wanted to use plug valves but couldn't because they would stick and freeze. Then Nordstrom invented the *pressure lubricated* plug valve. Acceptance was immediate. Nordstrom Valves extended valve life to many times that of ordinary valves embodying exposed seats and corrosion-inviting threads. Lubrication made the Nordstrom reputation for economical valve life. Then came later improvements in Nordstrom design — the Hypreseal Type for high pressures (now up to 15,000 lbs. test), Merchrome Coating for high temperatures. On high pressure oil well Christmas Trees, in chemical plants, in practically all oil refineries, on gas lines, Nordstrom Valves are the enduring type, because they are lubricated. They require no make-shift fittings, no wedges or rubber sealing contraptions.

NORDSTROM VALVES ***KEEP UPKEEP DOWN***

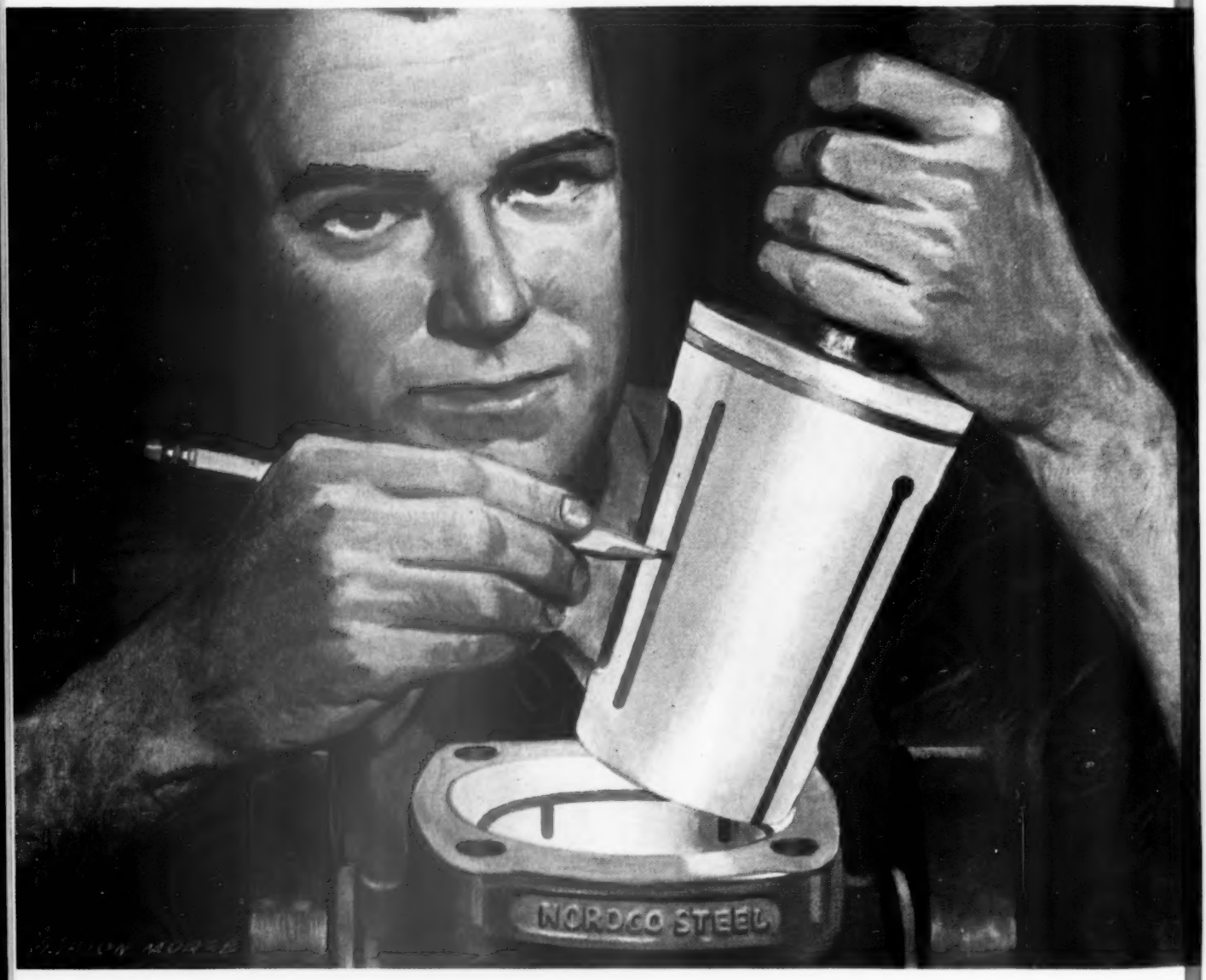
A stick of Nordco Lubricant, inserted in the shank of the plug, keeps the Nordstrom Valve in prime condition. It gives the vital lubrication required for long life, perfect sealing and easy turning of plug.

It takes *lubrication* to make a valve

SEE THOSE grooves in the plug of a Nordstrom Valve? They are vital to valve life. You don't find them in an ordinary valve because the latter relies upon a wedging action at the seat to seal. But in Nordstrom Valves the sealing action is simply and effectively obtained by positive hydraulic lubricant pressure. A stick of lubricant is inserted in the shank of the plug. By turning the top lubricant screw a powerful hydraulic force is transmitted by the lubricant through the connecting grooves. These grooves completely surround the ports, so when the valve is closed, no line pressure can creep through. Nothing can intrude. The entire contact surface of the plug is protected by a film of lubricant. The seat of the valve is not exposed. These valves cannot "freeze" or stick because pressure applied to the base of the plug through the "Sealdport" lubricant system will lift the plug sufficiently to quickly free it.

• • •

Nordstrom introduced pressure lubrication to plug valves. It's the feature which has made possible valve life many times that of ordinary valves.



Nordstrom

LUBRICATED VALVES

Sealdport Lubrication

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Main Offices: Pittsburgh, Penna. *Branches:* Boston • Brooklyn • Buffalo • Chicago • Columbia • Des Moines
Houston • Kansas City • Los Angeles • Memphis • New York City • Oakland • San Francisco • Seattle • Tulsa

Dec. 7, 1941, do not come within the purview of the rule.

That the total period of time extension must of necessity remain indefinite at this time, subject to further order of the Commission. Unless conditions at that time should warrant a different conclusion, it is intended that the time extension should terminate six months after actual hostilities have ceased with all the three major axis powers, unless war should continue with one or more of the powers for a period of 4½ years from Dec. 7, 1941, in which event the total period of the time extension is not to exceed 5 years.

That certain contracts are refundable on the basis of new customers or new customers' appliances attached, and the time extension will apply to all such refund provisions.

That certain contracts are refundable when gross revenues during any one year exceed a specified percentage of the amount of the deposit, in which case the time extension will apply to all such refund provisions.

That if the contract applies to service for gold mining or similar operations curtailed by the Federal government, the time extension shall be the period of the effectiveness of the curtailment of operations under such order.

Gas company representatives present at the Los Angeles and San Francisco hearings included O. C. Sattinger for Southern California Gas Co. and Southern Counties Gas Co.; E. E. Holloway and H. R. Dillon for San Diego Gas & Electric Co.; R. W. DuVal for Pacific Gas & Electric Co. Present also were P. H. Lester and E. E. Parker, for Public Utilities Investigation Committee of the California Progressives; Gilmore Tilman, assistant city attorney, and Carl Dunlap, Jr., assistant chief engineer of the Board of Public Utilities and Transportation of Los Angeles.

How Home Service Agents Can Be of Value to War Services Committee in Your Town

By

Mrs. George Wheeler

New England Regional
Director of War-Services

HOME SERVICE Agents can be of invaluable help in the Salvage program. There is a local salvage chairman in each community. Offer your services, as well as embrace every opportunity to do missionary work by correcting misunderstanding, misinformation, and explaining the need.

Today, each individual American soldier requires an average of 4,900 pounds of steel in the form of carried or supporting equipment. In World War I, he needed only 90 pounds. Project this figure to include an army of 10 to 13,000,000 men. Add to this the huge tonnage of steel blown to bits, as explosives (no scrap recovered from that). Add to that, steel being used to produce cargo ships and war ships, at a rate the world has never seen before, and you can readily see why scrap is needed.

Where do we get a large percentage of scrap steel? Scrap steel as used by lead and pigment producers is furnished from cans. Steel has been called the backbone of war production. 110,000 average tin cans will provide an amount of scrap steel normally required to produce the steel used in one medium tank or two light tanks.

In peacetime years, we as a nation have thrown away 17 billions of tin cans, and 2 billion pounds waste fats, as well as many tons of valuable steel scrap, without which we cannot make tanks, ships, or planes.

The facts of the tin situation are simple. For tin there is no substitute. There is no synthetic tin. Our consumption in 1941 was 100,000 gross tons; yet our production amounted to only 44 tons, mined in Alaska. The rest comes from Malaya and a small amount from Bolivia. 36% of this goes into tin cans.

Our military forces will soon be consuming 30,000 tons of food daily, much of which must be shipped in tin containers. An exceptionally heavy tin can coating must go on all containers shipped over seas and on the cans that go in the K and C rations. 21% of our tin supply is used for solder, and the remainder for bushings and bearings on airplane motors and for medical uses.

Medical uses of tin are becoming increasingly important. This syrette which I have here is an individual morphine hypodermic syringe which is issued to paratroopers, commandos, and boys who are going on individually dangerous missions. It requires the tin from 2 tin cans only. We as a country are collecting only one third available tin cans.

We must be successful in maintaining tin salvage program for the duration, in order to conquer the Japanese blockade against us in the far East. Our information is that nine tenths of our former tin supply, captured by the Japanese, will not be of use to us for one and one half years after the war is over.

Next, rags. When we realize that 2,000 pounds of rags a month are needed to keep a destroyer wiped clean, this in itself is an example of the increasing demands made by our war requirements. We are beginning to learn that these needs change constantly. There is at the moment a drive coming up, ordered by the Textile Division of WPB, for clothing for foreign countries.

What we need today, we may not be called on to save tomorrow. In global war the picture is constantly changing. For instance, we had a paper drive, and it was too good. Paper was bulging all over the place. As a result of some of the mistakes of that first paper drive, and the lessons learned from them, there has been established a ceiling price by paper dealers. The need for paper is increasing daily. The reasons for this are many. For instance, paper containers sent over seas are like the squirrel cage with the door open—they don't come back. Millions of paper board containers are sent over seas and are not returned for reuse. An example: K ration containers. Also, through ingenuity of wartime scientific developments, large tonnages of paper are now being converted into practice paper bombs,

wing tips, ammunition chests, shell protectors, and shell containers. Man power shortage in the woods to produce pulp, is another factor.

It can be easily seen what a big job we have today, and from now out, on paper. Salvage is really a war, and our war, on materials.

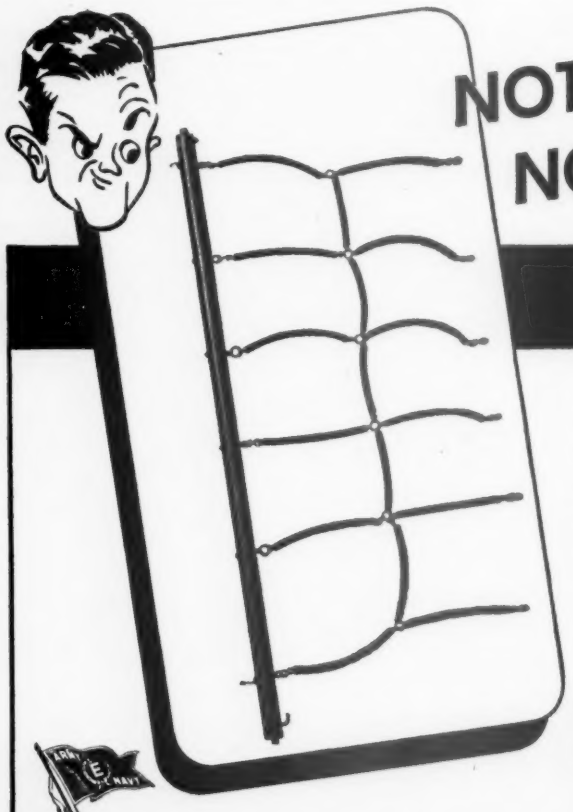
Another of our continuing or chronic problems is fats and oils. Fat salvage is the next item on the list. As you know, before the war more than 2 billion pounds of fat was wasted every year. In times of peace this waste was understandable, though I might add not pardonable. A majority—60% of our fats and oils—came from the Far East when that sea, which is now one of bitter combat, was free to be traveled. Now we must, in some way, ourselves make up this deficit. One of the major ways in which we can do this is by the salvaging of fats. The War Food Administration estimates that we will be short this year approximately two hundred million pounds of inedible fats alone. At present, we are collecting only about 51% of our quota. This, I might add, is a great increase over six months ago, but obviously every woman in the U. S. is not doing all she can. As of June of this year, 70% of the housewives were reported saving their fats, while only 47% of all housewives were reported as turning in these fats to the butcher. Thus our job, as women, is to get the remaining 53% of the housewives turning in their fats promptly, and the other 30% of the women actually saving fat. The success of this program is up to women. The facts on why we need waste fats are very simple: Glycerine is a by-product of fat and is used in ammunition, synthetic resins, camouflage material, protective coatings, paints, medical supplies, and drugs. Two pounds of household fats are required to make the ingredients for one incendiary bomb. Twenty-five million pounds of fat are consumed monthly in metal working and lubrication greases. Without fat, there would be no precision tools to make war instruments; without fat our transportation facilities of all kinds would stand idle. Ninety million pounds of tallow are required annually for the production of synthetic rubber. Without fat, K ration would not be protected from water, intense heat, and extreme cold.

You Home Service Agents, by virtue of your own desire to be of service, by your training, the nature of your work, your social and community activities, can render an invaluable service. You can be a very real contributing factor in the war effort. Help people to understand that war is not a static operation. Help them to understand that the demands on the civilian population must vary with the action on the battle-fronts.

One of the greatest needs is for missionary work. We are, as a people, I believe, the most generous, helpful people on earth. I have yet to find anyone who, with full comprehension of the vital nature of this program, will fail to lend unqualified support.

In the degree that this is accomplished, will we be winning the real war—by helping to unify our community and make War Services a foundation from which to build greater cooperation and a finer spirit of community living, than we have yet known.

Presented at Sales Managers' Conference, New England Gas Association, Boston, Mass., November 19th, 1943.



NOT a gate...
NOT a geoponic gadget

WHAT IS IT?

Sorry, we can't publish details, for this is one of many war products now being manufactured by PAYNE for the U. S. Government. ★ Until Victory is won, we may be unable to make *any* more furnaces or parts. But, meanwhile, PAYNE heating equipment is proving its sound design and inbuilt quality as never before. ★ Today's PAYNEHEAT owners will be tomorrow's best salesmen—helping make new friends and customers for our dealers—because they know from experience that PAYNE *builds to endure.*

PAYNEHEAT

NEARLY 30 YEARS OF LEADERSHIP

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GLOVER-WEST

CARBONIZING SYSTEMS

• *boost* production
• *cut* fuel costs

440 CARBONIZING PLANTS, in 24 countries, testify to the outstanding advantages of GLOVER-WEST Systems.

Today, with the fate of civilization depending on the speed and efficiency of our war-output, these advantages cannot be overstressed:

GLOVER-WEST CARBONIZING SYSTEMS

- ***LOWER*** Fuel Consumption and Maintenance
- ***FACILITATE*** Operation
- ***PRODUCE*** dryer, cooler Coke
- ***REQUIRE*** less Ground Area
- ***INSURE*** greater Flexibility

WEST GAS IMPROVEMENT CO.
424 Madison Ave., New York, N. Y.

All sizes up to 3,400 cu. ft. capacity

Meters
Diaphragms
Repairs
Provers
Pumps
Calorimeters
Wet Meters
Gauges
Apparatus

METER REPAIR PARTS

FOR
ALL MAKES — ALL SIZES OF METERS

LARGEST GAS COMPANIES NOW USING OUR PARTS

SEND FOR OUR CIRCULAR ON METER REPAIR PARTS

SAMPLES AND PRICES GLADLY SENT

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LAMBERT METER CO.
PLAINFIELD, NEW JERSEY

Far more *gas*
PURIFICATION
for your Dollar . . .

LAVINO "ACTIVATED" OXIDES

LAVINO ACTIVATED OXIDE

Supplied in unmixed form . . . ready for mixing with your own carrier . . . LAVINO "ACTIVATED" OXIDE is readily adaptable to the needs of your plant, whatever its size or requirements.

Not merely a "satisfactory" purifying medium by virtue of incidental properties, it is a material made specifically for maximum H_2S removal. As such, its practical capacity and activity are controlled factors. And, it offers maximum activity for trace removal and maximum shock resistance. Contains 70% Fe_2O_3 as received; approximately 10% moisture.

LAVINO ACTIVATED SPONGE

is furnished ready mixed, carefully coated on large, tough, specially selected hardwood shavings.

Both are made in the U. S. and are disinfected by a special Lavino process to minimize the formation of mold or other fungus growth.

Investigate now. There's no obligation. Just write—

E. J. LAVINO AND COMPANY
1528 WALNUT STREET, PHILADELPHIA 2, PA.

Customer Desires Regarding Ranges of the Future

A Test Survey of Customers' Opinion Regarding Future Gas Range Construction and Design Conducted by the Appliance Study Committee of The New England Gas Association.

By
Howard B. Hall

Chairman, Customer Range Survey Subcommittee,
Appliance Study Committee,
NEGA Manager,
Old Colony Gas Company

THE FIRST meeting of your Appliance Study Committee was spent in organization and developing an orderly approach to the study of post war appliances. Previous to any general meeting the members of the Association had been asked to submit suggestions for improvement in appliances, primarily from the sales point of view. Early in the second meeting it was found that *some* of the suggestions were a matter of opinion. In fact the members of your committee could not agree as to what *they* thought the customer wanted. We *finally* agreed *we* didn't know the real answers and decided to let the customer tell us what they wanted.

With this in mind we prepared a questionnaire, which we had printed with enough copies so that each of the 17 members of your committee would get 100 customers to tell us what they were thinkng. At a meeting of the general Committee the method of making this survey was discussed. It was agreed that where possible the survey would be made by representatives of the Home Service Departments. The questions asked and answers noted by these representatives. The illustrations were only to assist in making the questions clear. The answers given by the customer were to be accepted without any attempt to sell the customer on the view of the company or its representative.

The primary purpose of the test survey was to find customer preference in post war gas ranges. However it seemed advisable to know what the customers were thinking on their fuel of the future. Questions were therefore included so we would know what they were now using and what they thought they would select when they buy their next range.

We further decided that roughly half of the customers surveyed would be users of table top ranges and the balance users of other kinds of ranges in the same neighborhood. We feel that we have a reasonable cross section of our middle class customer.

Approximately 1500 surveys were made, the average response to most questions however was 1450.

Of those questioned:

844 were using table top ranges
220 were using cabinet ranges
400 were using some other type of range

The first question was—
What type of cooking equipment is the customer now using.

887 Single Fuel
172 Bungalow Utility
140 dual Oven
258 Other Combination

The balance of question 1 concerned the fuel now in use and question 2 covered the fuel they would select.

The following table, based on the answers to these questions shows the number of customers surveyed according to the various types of fuel they are now using and the number who think they would select some other type or types of fuel for their kitchen.

Customers Now Using		Would Change	
Type of Fuel	*Number Using*	*Number*	*%*
Coal & Elec.	1		
Gas	877	180	20.2
Electric	50	13	26.
Oil & Elec.	9	3	33.3
Oil & Gas	371	140	37.8
Coal & Gas	159	98	61.6
Coal	15	13	86.7
Oil	18	17	94.5
Total Change		464	31.

The only group that remained unchanged was the one customer using Electricity and Coal, who would continue with the same equipment.

From the above table we find that less customers on a percentage basis, desired to change their kitchen fuel in the group using Gas as the only fuel. The Electric group was selond.

Of those using single fuel and wishing to change—56% of them would select some combination using two fuels. This undoubtedly is the result, to a large extent, of the present unsettled fuel situation due to the war. People are interested in some auxiliary heating equipment and the kitchen seems the easiest place to put it. To those of us with rates that warrant the sale of gas operated kitchen heating—this should mean increased gas sales.

The results of the study has but minor significance to the work of this Committee but I feel that we as gas companies, should take advantage of the fact that 31% of the people surveyed would make some change. We can influence this thinking on the part of our present and possible customers. We should use every possible medium, including, public relations, local advertising, national advertising and employee education. This is only what customers are thinking. We can and must all do our part to change it.

Question No. 3

If you were to buy a new range today, what style would you select.

	Would Select		
Now Using	*Table top*	*Console*	*Cabinet*
Table Top	737	62	48
Other	459	68	86
Total	1196	130	184
	Percent		
Table top	87	7	6
Other	75	11	14
Total	82	9	9

Whether the preference for cabi-

Presented at the New England Gas Association Sales Managers' Conference, Boston, Mass., November 19, 1943.

net ranges by those not using table top ranges is due to the customers not being familiar with a modern table top range or whether there is a real need of a cabinet range I will leave to you to decide.

Question No. 4

How would you prefer the oven and broiler to be placed. (1) Separate high broiler, (2) Same burner for oven and broiler, (3) One large and one small oven with low broiler (Approx. cost $20.00 extra).

	Percent of those reporting		
Now Using	*High Broiler*	*Single Burner*	*2 Ovens*
Table top	55	29	16
Other	54	28	18
Average	54	29	17

54% of those answering prefer the high broiler—17% wanted 2 ovens even at an extra cost of $20 and 29% would be satisfied with present location. I feel that this indicates that more people are interested in broiling.

Question No. 5—Oven Size

	Want Larger Oven		*Want 2*
Present Oven Size	*Yes*	*No*	*Ovens*
14" or smaller	91	10	16
16"	262	415	105
18"	63	317	60
19" or over	8	87	13

The answers to this question indicate that no oven should be as small as 14 inches. Of those reporting 16" ovens, 37% would prefer a larger oven. Users of 18" ovens were not asked if they would prefer a smaller oven. If we assume they *would* prefer an 18" oven, it is indicated that 40% of the customers surveyed would like an 18" oven. I would not interpret this to mean that 40% of new ranges should be built with 18" ovens as this survey probably did not include any large percent of apartment users.

Question No. 6—Burner Arrangement

The wide variation in customer preference between companies might indicate the type of burner arrangement each company featured in their advertising. The answers to this question varied greatly in different companies. However, 47% prefer the conventional 4 burners on one end; 20%—2 burners each end; 15% staggered burners, and 9% in the center.

Question No. 7a

Would a Timer for the oven be desirable? (With automatic cut off only—manual turn on) approx. cost $10.00.

This is a new device which might be developed and if attractively presented might get a ready customer acceptance. 887 or 62% said they would like such a device.

Question No. 7b

Would you prefer a minute minder —68% said yes.

Question No. 8

Would you prefer glass inserts in oven and broiler doors or plain doors.

Glass in oven doors varies with companies—69% No in one company and 73% Yes in another—Average 51% Yes.

Question No. 9

Are you interested in a range with built in gas heating unit.

23% Yes—this however runs higher with the companies having a Kitchen Heating Range they have promoted.

Question 10

Do you want a deep well cooker
Do you want a pressure cooker
Where on the range do you want it

46% want a thrift cooker—only 26% want a pressure cooker. Of those expressing a preference on location—50% want top—25% door—25% drawer.

Question No. 11

Do you want coverals for the top burners.

These answers show that 1144 or 79% do want them against 310 that don't want them. This may indicate the need of supplying them both ways or it may mean that the low priced ranges could be without coverals. The survey was not comprehensive enough to break it down by class of customers. One company gave us this breakdown which follows:

Upper class	96%
Middle class	85%
Lower class	78%
Average	86%

Question No. 12

Do you want a warming compartment.

This shows 764 or 53% of the customers answering would like a warming compartment. No estimate of cost to the customer was given. This might affect materially the desire for a warming closet. It however has a marketing possibility worth some serious thought by our range manufacturers.

Question No. 13

Electric lights and outlets

	Yes	*No*
Light for top burners	780	607
Light in Oven	455	823
Built in Electric Outlet	765	682

This also presents some merchandising possibilities worthy of consideration by our range manufacturers.

REED'S 4 WHEEL
Razor Blade Pipe Cutters

IDEAL FOR ANY TRENCH OR OTHER CLOSE QUARTER JOBS

5.46
F. O. B. ERIE

Capacity
½" to 2"
Weight 5 lbs.

The REED FOUR WHEEL Cutter operates with a short back and forth motion through only one-third of a circle. Each of the four wheels exerts the same pressure on the pipe, and all 4 therefore cut evenly and completely through the pipe at the same time.

Equipped with Reed special alloy RAZOR BLADE Wheels, which cut with remarkable ease, leave little burr, and have a long life of useful service.

A sample cutter for test and trial may be ordered on memorandum invoice, to be paid for if retained or returned for credit if unsatisfactory. Try it once, and you will use no other.

REED MFG. COMPANY
1436 W. 8th Street • ERIE, PA.

Proper Selection of Safety Goggles

By
Lyne S. Metcalfe

(In the November issue, AMERICAN GAS JOURNAL printed an article by Fred A. Herr, on the "Goggles-For-Safety-Month," sponsored among its employes by The Southern California Gas Company. In this article, the techniques of properly fitting safety goggles—from an authoritative source—is offered as additional information on the subject of getting maximum protection with goggles—Editor)

THE EFFICACY of the modern non-prescription safety goggle in preventing eye injury in the gas industry has been proved through long experience, as is true in many other industries speeding up operations in the interest of the war effort.

However, there are certain factors which enter importantly into the achievement of maximum benefits and protection from their use which may not always be fully realized in the gas plant. The *purpose* of safety goggles is to protect the eyes of the worker engaged in work hazardous to the eyes, and anything that influences him or her to remove them while at work nullifies the protection which they assure. Safety goggles do no good when pushed up over the worker's forehead, or when they are hung on a convenient nail near the place of activity.

Yet, every foreman and personnel manager knows that workers do lay their safety goggles aside from time to time—while at work—and perhaps, often wonder why. There are two principal reasons for this, one *discomfort* caused by improper fitting of the goggles, two *poor vision* occasioned by improper fit and adjustment.

To help gas plants in seeing to it that each goggle-wearing worker has the proper size goggles, properly fitted to his or her own facial characteristics, a new sound motion picture has been produced for The American Optical Company by The Jam Handy Organization, which visualizes the simple techniques of goggle adjustment.

The title of this motion picture is, "Right On the Nose," and prints or copies of it in 16 mm will be loaned free to any gas company or group interested upon request. The picture has a screen or running time of 14 minutes, with oral commentary recorded directly on the film itself.

Briefly, this motion picture shows that:

a) Improperly fitted safety goggles are uncomfortable to wear, and therefore the worker, may discard them at each opportunity, in this way subjecting himself to eye injury, and loss of time on the job.

b) Improperly fitted goggles may interfere with good vision, which also causes the worker frequently to discard them.

Primarily, this film is directed to safety engineers, nurses, foremen and those in the gas company personnel department responsible for protective measures.

Here are some highlights from the motion picture, "Right On The Nose,"

Spectacle Type Safety Goggles:

1. There should be a proper adjustment of the side bows so that the temples fit snugly but comfortably about the ears.
2. There should be a proper adjustment of the bridge so that the goggles rest comfortably on the solid bone of the bridge of the nose without pinching.
3. They should be so adjusted that the eyes of the wearer look through the lens centers.
4. The side-shields should be so adjusted that they fit comfortably, and give maximum protection.

Eye-Cup Type Goggles:

1. There must be a proper adjustment of the ball-chain so that the eye-cups fit comfortably in the orbits of the eyes, and so that the wearer looks directly through the the lens-centers.
2. A proper adjustment of the headband is necessary, so that it will hold the goggles snugly but comfortably in place.

It is pictured and explained by the film that the facial characteristics of all of us differ, and that for this reason safety goggles should be adjusted to meet the characteristics of the individual worker—if he is to get maximum protection from them and to enjoy comfort while he works.

For copies or prints of this motion picture (on free loan), address The American Optical Company. Southbridge, Mass.

Photos courtesy The Jam Handy Organization

1—These goggles are too wide for this face, with the result that the eyes do not look through the lens centers.
2—A pair of truing pliers make it easier to adjust the bridge of the goggles.
3—In adjustment, simply use a gentle pressure with the thumb,—fingers acting as brace.

War Production Board and

Other Administrative Orders

Part 4500—Power; Water, Gas, Electricity, and Central Steam Heating

(Supplementary Utilities Order U-1-h)

4500.9 **Supplementary Utilities Order U-l-h-(a) Permission to build certain extensions.** Notwithstanding the provisions of paragraph (h) (1) of Utilities Order U-1, extensions of electric, gas, water, and central steam heat facilities may be made or connected by a producer, subject to the restrictions of paragraph (b) below, to serve the following types of consumer premises:

(1) Premises which are being built or remodeled under authority of a specific authorization issued pursuant to Conservation Order L-41,

(2) Premises which will be occupied exclusively by the Army, Navy, Maritime Commission, War Shipping Administration or Civil Aeronautics Authority,

(3) Premises of an industrial or commercial consumer.

(i) In cases where the extension or enlargement of utilities facilities is necessary for the production of one of the products or the supply of one of the services listed in Schedules I and II of CMP Regulation 5 or

(ii) In cases where the consumer is an electric, gas, water, steam heat, telephone or telegraph utility; a person engaged in the business of producing, refining or marketing (except retail) natural gas or petroleum products; or a person engaged in the business of mining or burning refractories to whom a serial number has been assigned under Preference Rating Order P-56.

(b) *Restrictions on construction.* Extensions of the type permitted by paragraph (a) of this order may be built only if all of the following conditions are satisfied:

(1) The cost of material for any such utility extension does not exceed $5,000 but exceeds $1500 in the case of underground construction, or $500 in the case of other construction. No job or project may be subdivided to come within these limits.

(2) The extension does not duplicate an adequate service already installed or constitute a stand-by service.

(3) No other producer can render the same service with lesser amounts of critical material.

(4) In the case of extensions to buildings which are to be used exclusively for dwelling purposes the extension (including service drop or service pipe and any portion built by or for the consumer) can be built within the limits established by the Housing Utilities Standards issued

IF IT'S A TOUGH WINTER ....

You should be prepared for the following reasons:

1. GPM IRON HYDROXIDE should be specified for your purifying boxes, since it is uniform in quality and consistent in performance winter and summer.
2. Your labor shortage will continue to become more acute, so reduce the number of box changes by using this oxide with its maximum sulphur removing properties.
3. No unexpected box changes are necessary with GPM, since it is highly active and consistent in trace removal.

WHY GAMBLE — PREPARE NOW BY FILLING YOUR PURIFIERS WITH GPM IRON HYDROXIDE

GPM IRON HYDROXIDE

GAS PURIFYING MATERIALS COMPANY

Long Island City 2, N. Y.

by the War Production Board.

(5) In the case of extensions to premises which are to be built or remodeled under authority of a specific authorization applied for pursuant to Conservation Order L-41, the producer has completed Form WPB-3348, and delivered it to the builder for attachment to the builder's application for L-41 approval.

(c) *Assignment of preference rating and CMP allotment number.* (1) The preference rating AA-3 is hereby assigned to orders for material other than controlled material, and the abbreviated CMP allotment number U-9 is hereby assigned to orders for controlled material, to be placed by a producer for use in the construction of extensions of facilities authorized by this supplementary order or to replace in inventory material so used.

(2) The preference rating and allotment number assigned above may be applied by a producer by using the certification provided in CMP Regulation 7.

(3) An order for controlled material bearing the CMP allotment number U-9 shall be deemed an authorized controlled materials order. This allotment number shall constitute an "allotment number or symbol" for the purpose of CMP Regulation 3.

(d) *Acquisition of material.* The acquisition of material for extensions of facilities authorized by this supplementary order is subject to the following restrictions:

(1) It may be ordered only to the extent that it is not available in the producer's inventory in excess of a practical working minimum.

(2) If taken from such excess inventory it may not be replaced.

(3) If taken from practical working minimum inventory it may be replaced therein, but only with the preference rating or allotment symbol assigned in paragraph (c) of this supplementary order.

(4) It may not be ordered until either

(i) The producer has been advised that the builder of the structure to be served has received L-41 approval, or

(ii) The producer has been advised by such builder that L-41 approval is not required and has received a written request from such builder to supply the utility service.

Issued this 30th day of October 1943.

Stove Rationing Industry Letter Office of Price Administration Exclusive Sales Arrangements

Manufacturers or distributors of stoves who had entered into arrangements before last December 19 for the sale of their stoves exclusively in an area, may continue these arrangements and thus permit their exclusive dealers to maintain the goodwill they have built up, according to Amendment 2 to Ration Order 9A, effective October 19, 1943.

Such exclusive sales understandings can be continued only if the arrangement was really exclusive, i.e., if the seller made no stove sales to any other dealer or distributor in the area than the one with which the arrangement was made. However, this does not include sales made under WPB priorities before August 24, 1943.

To assure that the proper number of stoves will move to the various areas, in line with the quotas set up by the stove ration order, these new provisions do not recognize exclusive sales arrangements under which the manufacturer may limit the number of stoves which his exclusive dealer may buy.

This action was taken so that the provision of the ration order would follow normal business practices in the stove industry as closely as possible. It has been a long established policy in the industry for manufacturers and distributors to sell their stoves in specified areas only to particular companies. It will probably not be necessary to permit this goodwill, built up through the years by these distributors and dealers, to pass on to other firms in the same area. This would be the case if all exclusive sales contracts had to be discontinued.

Since it is in the interest of the exclusive dealer to move out the particular brands of stoves he sells, the over-all distribution of stoves should not be restricted in any way by the amendment.

List of Rationed and Non-Rationed Stoves and Equipment

Rationed

Gas Heating Stoves—Natural Gas, Manufactured Gas and Liquefied Petroleum

1. Gas log radiant heater
2. Open radiant heater
3. Circulating heater
4. Wall heater
5. Gas steam radiator
6. Space heater

Gas Cooking Stoves

1. Cooker range also known as rangette
2. Full size range
3. Combination gas and oil
4. Combination gas and coal
5. Bungalow range gas and coal
6. Bungalow range gas and oil

The Bob White ELECTRONIC BOX LOCATOR

Gives rapid location of curb and street boxes, drip boxes, risers, manhole lids and cleanouts.

This locator consists of a loop aerial, enclosed in a wooden disc, amplifier and earphone.

When the edge of the loop aerial in the disc passes over a covered box or riser, the earphone indicates its location with a "bob-white" call.

Its operation is not affected by snow or ice, small pieces of metal, low hanging wires, electrical fields, radios or passing autos. Any man can easily operate it.

Complete operating details, effective depths in operation and other features sent on request.

Ferguson & Pascoe

11 Hill Street Newark 2, New Jersey

Non-Rationed

Gas Heating Stoves—Natural Gas, Manufactured Gas and Liquefied Petroleum

1. Furnace
2. Floor furnace
3. Unit Heater (designed for commercial or industrial use)
4. Water heater

Gas Cooking Stoves

1. Hot plate
2. Laundry

Recent Official Interpretations

"Designed for Household Use"

A heating stove suitable for use in such places as housetrailers, tents or houseboats is "designed for household use" within the meaning of Ration Order 9A.

Down Payment as Acceptance of an Order

The acceptance of a down payment on the purchase price of a stove constitutes an acceptance of an offer or order within the meaning of Sections 2.2 and 6.3, since a down payment presupposes the existence of an offer. Thus, a dealer may not accept a down payment from a consumer for a stove until he has been furnished a certificate.

Combination Heating and Cooking Stove

The phrase "combination heating and cooking stove" or "combination stove" as used in Ration Order 9A means a stove designed as a two-part stove which has either (1) a coal or wood combustion chamber and a set of gas burners; or (2) two separate sets of burners; oil and gas, or gas and gas. The phrases do not refer to a stove designed to have but one combustion chamber or group of burners which gives off heat and which may also be used for cooking.

Certificates Required for Transfer

Section 6.2 (a) of Ration Order 9A requires that a certificate for a combination heating and cooking stove be surrendered in every case of a transfer of a combination heating and cooking stove, in the trade as well as to a consumer.

Wall Heater as "Above the Floor Equipment"

A gas heater designed for installation in the wall of a room is equipment designed for "installation on or above the floor," within the meaning of Sections 1.1 (a) and 13.1 (a) (17) of Ration Order 9A.

Office of War Information

Order L-63 Modified

Suppliers who are required to keep inventory records under Limitation Order L-63 no longer need file Form WPB-825 (formerly PD-336), the War Production Board has announced.

Amendment of L-63 also provides that suppliers must keep records of total net monthly sales from stock and total inventory of supplies at the end of each month, but need not keep a separate record of each type of supplies.

Another change made by today's revision clarified the meaning of the fourth exemption from the order by substituting the phrase "replacement parts specially designed to fit only one model and brand of machinery or equipment and adaptable to no other use" for the phrase "functional replacement parts for machinery and equipment."

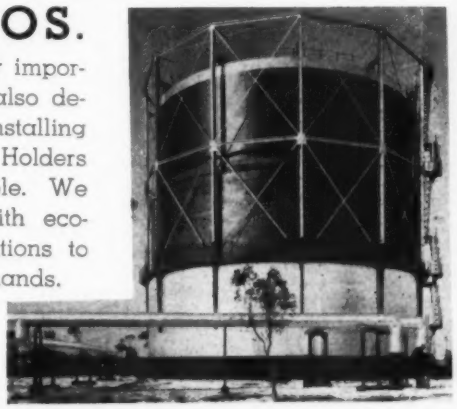
Effective November 12, 1943

When is a Plant a Nuisance?

If your plant is noisy, or if it emits a disagreeable odor, it usually is not regarded as a nuisance if the plant is located in an isolated spot. That is, such a plant should not be built in the midst of residences. Its owners will then be subject to lawsuits and possible ejection. But human beings commonly follow plants. Homes are built around the factories. And then in the course of time the residents begin crying "Nuisance!" The plant owners are sued. Some courts find for the plants and some find for the complainers. Just recently, for instance, a plant in Long Island City was fined rather heavily for being noisy at night. Despite the fact that the plant is engaged in war work, and despite the fact that apparently, it has never before been considered a nuisance, that is what it is now—because it is working overtime.

STACEY BROS.

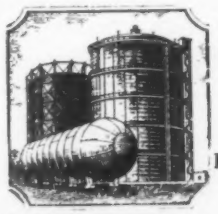
now engaged on many important, U. S. war orders are also designing, fabricating and installing the famous STACEY Gas Holders where priorities are obtainable. We serve the Gas Industry with economic and efficient installations to meet present and future demands.



500,000 cu. ft. all welded panel type wet seal gas holder, North Miami Beach, Fla.

☆ ☆ ☆

Our Gas Holder Inspection Service will aid your wartime maintenance requirements. A staff of trained inspection engineers is at your service to inspect your equipment and report on recommendations. Write for the details.



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MANUFACTURERS OF: Stacey-Klonne Dry Gas Holders. Telescopic Gas Holders. Stacey "Bullets", Vertical or Horizontal. Also Shop Assembled and Field Erected Steel Alloy and Aluminum Structures in Welded and Riveted Construction.

Laboratories Distribute Two New Research Bulletins

Latest published results of studies in progress under the sponsorship of the American Gas Association's Committee on Domestic Gas Research are now available through the following additional research bulletins:

Research Bulletin No. 17—Automatic Flash Tube and Pilot Ignition of Oven and Broiler Burners on Manufactured Gas

Bulletin No. 17 is the eighth of a series of bulletins issued on Domestic Gas Research and the second devoted specifically to flash tube lighting. Various methods of automatic ignition of oven and broiler burners are reviewed together with the development of flash tube applications and resulting field experiences. Results of intensive study of the effects of various factors such as size and shape of flash tubes, relation between their diameter and length, tube restrictions and many others are presented together with recommendations to be followed in the design of flash tube systems to secure best performance. Thorough scientific data is now made available for the first time for use in meeting many of the problems frequently encountered.

Research Bulletin No. 19—Effect of Cold Inlet Water on Performance of Automatic Storage Gas Water Heaters

Representing the third research bulletin on Domestic Gas Water Heating Research, Bulletin No. 19 presents much new and original data on the effects of inlet water at a temperature slightly above freezing on the performance of gas storage water heaters. Commonly used types of storage systems were considered in this study and operating data obtained on representative models. Considerable variation was found between performance of external and internal flue type heaters. Importance of adequate flue space was definitely established and new and fundamental data presented for use in the design of heaters to insure their improved performance. Influence of the amount of flue surface in contact with cold water is fully described.

Copies of these two new bulletins may be obtained from the American Gas Association Testing Laboratories, 1032 East 62nd Street, Cleveland (14), Ohio, at $1.25 each, plus postage.

Strait Becomes Chairman A.G.A. Rate Committee

Appointment of E. N. Strait, of the Public Utility Engineering and Service Corporation, Chicago, as Chairman of the Rate Committee of the American Gas Association has been announced by Ernest R. Acker, President of the Association. This is not the first time Mr. Strait has been head of this important activity as he was Chairman of this group in 1934.

The Rate Committee is made up of rate and valuation experts who meet regularly to consider developments affecting utility rates and related matters. From time to time in the past, the committee has issued valuable reports on gas industry matters. As a long-time member of the committee and past Chairman, Mr. Strait is well qualified to direct the Association's rate studies. He is also a member and Vice-Chairman of the Edison Electric Institute's Rate Research Committee.

"CLEVELANDS"

TOPS for Cross Country Transmission Lines—Distribution Lines—Short Service Extensions—Stripping Pipe for Reconditioning and Relaying—Ordinary Maintenance.
THE CLEVELAND TRENCHER COMPANY
"Pioneer of the Small Trencher"
20100 ST. CLAIR AVENUE CLEVELAND, OHIO

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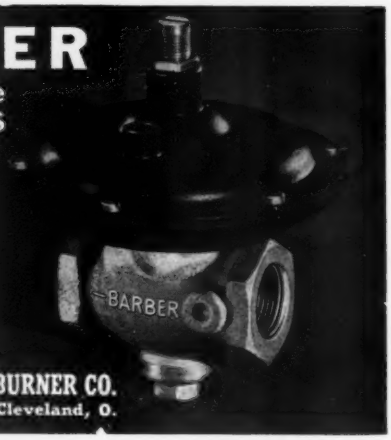
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SUPERIOR GAS METERS
For Sound Values and Continuous Operating Economy
Meters for Domestic and Industrial Use. All Sizes 5B to 60C.
Wet Test and Demonstration Meters — Diaphragms —
Service Cleaners — Provers — Meter Repairs
Write for details and quotations
SUPERIOR METER COMPANY, INC.
167 41st Street Brooklyn, N. Y.

Revolutionary Type Aircraft Heater

A new aircraft heater of revolutionary design, said by aeronautical engineers to be the only high-altitude combustion type airplane heater that meets every requirement of modern aviation, was given its first public showing December 1st to a group of editors of trade journals and newspapers by Messrs. C. B. Phillips, Vice-President, R. A. Bell and J. I. Trimble, of Surface Combustion, Toledo, Ohio. This company is the country's oldest and largest manufacturer of gas-fired industrial and space heating equipment.

The presentation took place in the Palm Room of the Waldorf-Astoria Hotel, New York. The demonstrations included actual operation of the heater, to illustrate its unique and exclusive "Whirl-Flame" principle.

High-altitude airplanes have this new kind of gasoline heater that lights and burns almost instantly at any temperature down to 70 degrees below and at any altitude (57,000 feet in simulated pressure chamber). Its major purposes are to defog, de-ice, and anti-ice windshields, gunners' side windows and turrets—to prevent ice from forming on wings and empennage surfaces, to keep bombsights clear, and to keep instruments, gun breeches and other equipment operative—even to keep the crew alive.

This heater, known as the Surface Combustion "Janitrol," is exclusively a war development, about which little information has been made public to date.

When high-altitude flying suddenly passed from the experimental to the routine stage at the beginning of the war, the air forces suddenly needed a compact heater that could be relied on to combat the severe stratosphere cold. It had to weigh as little as possible and occupy minimum space.

Difficulties in the way of designing such a heater included: The air at 30,000 feet is so thin that a candle will not burn because there is insufficient oxygen; to support combustion, a surplus of air must be mixed with the fuel as in the cylinder of a supercharged engine. Other problems encountered in developing the heater were: the necessity of operation at both high levels and at ground level; the capability of being lighted at 70 degrees below zero; ability to stay lit in a long dive when the air pressure suddenly increases and may build up to ten times the pressure before the dive starts; assurance of sustained operation regardless of any angle or altitude a plane may take.

Although the heaters usually operate from the air supplied by the motion of the plane, an auxiliary blower can be installed for use in flight and for service when the plane is on the ground.

The heater can be turned on or off at the flick of a switch or by automatic temperature controls. The smallest heaters for pursuit ships, dive bombers, trainers, etc., are about the size and shape of an ordinary automobile muffler. The larger heaters are two or three times that size. The biggest of them burns a little more than a gallon of gasoline an hour. The four sizes now available range from 15,000 to 125,000 Btu. output per hour. The present larger sizes produce about the same amount of heat used for heating a room of 20,000 cubic feet. Larger sizes are being developed. As many as ten to fifteen heaters of various capacities may be used in a large plane. The number and size depend on the heating job to be accomplished.

MIGHTY MIDGET! This revolutionary type Surface Combustion "Janitrol" aircraft heater weighs only six pounds yet heats the mightiest of airplanes when outside temperatures range to 70 below zero.

Principles of Operation

The principle of operation engineered into the design of the aircraft heater has proven the simplest and most efficient for this type of service. This unit uses liquid fuel, generally high octane gasoline. It operates equally well, with minor modifications, on lower octane gasolines and other liquid fuels.

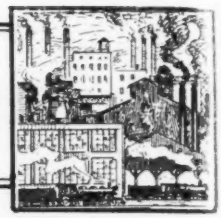
The heater operates on the principle of burning a vaporized or atomized fuel in the center of a column of spinning air. The whirling action of the combustion air is produced by introducing the air into the cylindrical combustion tube tangentially to its inner surface.

The liquid fuel enters the combustion tube through a vaporizer or spray nozzle ahead of the combustion air inlet. This vaporized or atomized fuel is mixed with the spinning column of air, forming a long, tapering core of enriched gases completely surrounded by the whirling air column. The combustion process is thus prolonged or delayed for maximum efficiency and heat liberation throughout the full length of the combustion tube. Since the fuel and air are mixed within the heater, its operation is independent of additional mechanical devices, a feature which the manufacturer stresses as being of particular importance.

The resulting flame is stable and sustains combustion under the most adverse conditions. The long luminous "Whirl Flame" is swirled around itself many times, thus reignition is continuous and the combustion process is "self-piloting." There is no "blowing off" of the flame as experienced on the conventional burner system when greater volumes of air are admitted. The flame pattern is comparable to a tightly wound spiral. This controlled

(Continued on page 40)

News of the Gas Industry



Crocker Elected New President of Columbia Gas and Electric Corp.

Stuart M. Crocker was elected president of the Columbia Gas and Electric Corporation at a meeting of the board of directors November 12th, it was announced by Philip G. Gossler, board chairman. Crocker succeeds Edward Reynolds who is retiring to devote full time to his duties as administrative head of the Supply Division, Office of the Surgeon General of the Army, which position he has occupied since November, 1942, under leave of absence from the Corporation.

Crocker has resigned as vice-president of the General Electric Company to take over the presidency of the Columbia company.

"Mr. Crocker has established an outstanding record of achievement in industry and public service, and has earned national recognition as a forward-looking younger business leader," Gossler said. "As the new chief executive officer he will help the company in its constant endeavor to improve the standard of service to the public, and in handling the war and post-war problems which confront us."

Mr. Crocker was born at Cambridge, Mass. May 26, 1898, graduated Harvard in 1921, and served with Radio Corporation of America until 1922, when he joined the General Electric Company as assistant to Owen D. Young, chairman of the board. In 1927 Crocker became vice-president and treasurer of United Electric Securities Company. He was elected vice-president of International General Electric Company in 1930, and appointed assistant to Charles E. Wilson, then executive vice-president of the parent company in 1938. He was elected vice-president of General Electric in 1940, and since Pearl Harbor, he directed the company's electronic production for the Armed Forces at Syracuse, N. Y.

Columbia Gas and Electric Corporation owns and operates natural gas and electric properties serving directly 1,229,000 gas consumers and 407,000 electric consumers.

Nichols Elected Member of Controllers Institute

Calvin A. Nichols, acting treasurer and controller of the American Meter Company, New York, has been elected to membership in the Controllers Institute of America, a technical and professional organization of controllers devoted to improvement of controllership procedure.

Officers of the newly formed Indoor Climate Institute, viewing the membership invitation brochure, presented at a joint meeting of the Board of Directors and Advisory Council to The Board, held at the Drake Hotel, Chicago, November 4th. Reading from left to right, (Seated) 1st Vice President, T. A. Crawford, Timken Silent Automatic Division; President, Paul B. Zimmerman, Airtemp Division-Chrysler Corporation; Secretary, R. E. Moore, Bell & Gossett Company. (Standing) Treasurer, E. N. McDonnell, McDonnell & Miller; 2nd Vice President, L. N. Hunter, The National Radiator Company.

Indoor Climate Institute

A national program of education was launched in behalf of the heating, cooling, and air conditioning industries at the first joint meeting of officers, directors and advisory council to the board of the Indoor Climate Institute held in Chicago early in November.

Pointing out the job that can be done on an industry-wide basis, I.C.I. President, Paul B. Zimmerman said:

"The American public has benefited immeasurably from the cooperative efforts of manufacturers who have been inspired by a desire to have all the members of an industry subscribe to policies, principles and practices which assure the public of better products and better living conditions. The modern kitchen is a perfect example of this educational effort on the part of manufacturers. Better lighting, better wiring—many other of the everyday aids to better living—were stimulated in the same manner.

"Today, heat, next to food, is the most important factor affecting the health of Americans. The activities of the Indoor Climate Institute will include a far-reaching program of training and public education on improved living standards. The home owner will, for the first time, be able to understand and evaluate the many advantages obtainable through modern heating, cooling and air conditioning equipment properly installed. This will assure greater indoor comfort and health."

Headquarters of I.C.I. will be in Detroit, Michigan, but local authorized chapters will be established in the principal cities of the United States to bring the program into every community.

Public Service Increases Capacity of the Harrison Gas Plant

In order to meet the increased demand for gas used in its large industrial area, Public Service Electric and Gas Company of Newark, N. J., is making additions to its Harrison, N. J., plant, which is one of the largest carburetted water gas plants in this country.

The production capacity of this plant will be increased through the installation of an automatically operated, self-clinkering, U.G.I. Model "D" Mechanical Generator Carburetted Water Gas Apparatus, waste heat boiler, blower unit and extension to the present generator house, foundations and fuel handling equipment.

A.G.A. National Advertising Campaign for 1944

The American Gas Association's Committee on National Advertising has added House Beautiful, House & Garden, True Story, Parents, Architectural Forum and American Builder and Building Age to its media list, now extended to the end of 1944.

The basic list of magazines presently being used consists of Saturday Evening Post, Life, American Home, Better Homes & Gardens, Ladies' Home Journal and Good Housekeeping.

The first insertions in the new magazines added to the list will appear in House & Garden for January, 1944, and the February issues of True Story, Parents and House Beautiful. Advertisements in Architectural Forum and American Builder and Building Age will start with the July, 1944, issues of those magazines.

New A.S.T.M. Standing Committee on Industrial Aromatic Hydrocarbons

At an organization meeting of the new A.S.T.M. Committee D-16 on Industrial Aromatic Hydrocarbons held in New York on October 26, the personnel of the group was approved and temporary officers were selected. The first four sub-committees which will undertake work were agreed upon. This new standing committee of the American Society for Testing Materials was authorized after the A.S.T.M. Executive Committee had considered suggestions from a number of sources that such a group could contribute much in this field through the development of standard methods of tests, definitions and specifications for these materials and related products which boil below 400° F. Products covered by the committee would include various grades of benzene, toluene, xylene, solvent naphthas and other light oil products.

Officers: The temporary chairman of the committee is J. M. Weiss, Consulting Chemical Engineer, New York City, an authority in this field who has devoted considerable time to many of the technical problems. The temporary secretary is R. P. Anderson, Secretary, Division of Refining, American Petroleum Institute. C. A. Lunn, Process Engineer, Consolidated Edison Co., New York, N. Y., is vice chairman. These officers will serve until June, 1944, when the committee will select permanent officers. The Advisory Committee which will serve as the administrative group will consist of the three officers, plus the chairman and vice chairman of each of the subcommittees.

L. M. Ayers Appointed to A.G.A. Personnel Committee

L. M. Ayers, Industrial Relations Manager of The Peoples Natural Gas Company, Hope Natural Gas Company, and The East Ohio Gas Company, has been appointed Chairman of the Personnel Committee of the American Gas Association it has been announced by Ernest R. Acker, president of the Association.

The Personnel Committee is now in its eighth year as an Association activity and is engaged in a continuing study of the industrial relations problems of the gas industry. At present, it is devoting particular attention to methods of alleviating the manpower shortage and contributing to the effective prosecution of the war.

A Manual on Natural Gas Distribution Jobs

The Southwest Personnel Conference of the American Gas Association has prepared and printed a manual of Natural Gas Distribution Job Classifications according to an announcement by Chairman M. V. Cousins, United Gas Pipe Line Company, Shreveport, La. The manual covers the functions and responsibilities, the minimum training and experience required for replacements under wartime emergency and the physical requirements for 118 job classifications found in all departments of natural gas distribution operations. It is for use in connection with Manning Tables, Replacement Schedules, Selective Service requirements and any other use to which a job classification manual can be put. It was compiled by a committee headed by Oakah L. Jones of the Oklahoma Natural Gas Company, Tulsa, Okla.

The books are bound and are available from American Gas Association Headquarters, 420 Lexington Avenue, New York 17, N. Y., at a charge of $1.00 per copy to cover the printing cost.

The Outlook for Range and Refrigerator Sales

A recent survey, the second of a series by the U. S. Chamber of Commerce, indicates that 53 per cent of the Nation's families are in the market for one or more household items in the coming six-month period.

According to findings presented in the report, a breakdown of this aggregate household appliance figure shows that 1,715,000 families intend to buy refrigerators and 1,435,000 families intend to buy stoves.

Obviously, these purchases cannot be made until critical material is again released for the manufacture of consumer goods. Consequently, this vast purchasing power indicates the size of the immediate post-war market that will be open to the appliance dealer.

A large part of this accruing market for appliances is, of course, earmarked for replacement of old and obsolete equipment.

It is interesting to note, however, that the report further indicates that 1,015,-000 families intend to build or buy a new home within six months after the war is over. It is obvious that this postwar building boom, which is calculated at five billion dollars, will produce a further need for home equipment appliances and furnishings.

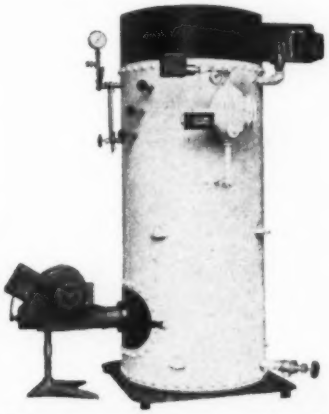
It is evident from this statistical material that appliance dealers who have been and are weathering the present period will be in an excellent position to cash in on this rapidly developing post-war market.

Third West Coast Office Added by Cooper-Bessemer

The opening of another Pacific Coast factory branch office has just been announced by The Cooper-Bessemer Corp., Mt. Vernon, O.

The new office, located at 401 Rust Building, San Francisco, Calif., will be in charge of John G. McKissick. The other two offices have long been established at Los Angeles, Calif., and Seattle, Wash.

LATTNER GAS — OIL BOILER 3 HP to 35 HP.



Burns natural gas or regular furnace oils with equal efficiency using same burner.

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Cedar Rapids, Iowa

THE STACEY MANUFACTURING CO.
Engineers Fabricators Constructors
• Gas Holders • Gas Plant Equipment • Steel Plate Construction •
GAS HOLDER INSPECTION SERVICE
Cincinnati — Ohio

92
STACEY SINCE 1851
Years

Mr. Payne (left) congratulates Carl Rosenberg, blind metal worker in the Payne plant, on the part played by himself and other handicapped employes in winning the coveted "E" award. Standing at right is Miss Hazel Hurst, head of the Hazel Hurst Foundation for the Blind, Inc., herself blind since infancy, who is said to have placed more than 200 sightless workers in western war industries, and to have trained over 100 "Seeing Eye" guide dogs for their use.

Payne Furnace Co. Awarded Army-Navy "E"

Payne Furnace & Supply Co., Beverly Hills, California, has been awarded the Army-Navy "E" for outstanding excellence in war production.

Major Walter F. Zwick, U. S. Army Air Forces, in presenting the award, at a colorful ceremony attended by more than 1,000 employes and their families, plant officials, military men and civic leaders, said that less than 3 per cent of eligible plants throughout the country have qualified for the award. E. L. Payne, vice-president and general manager, made the acceptance address. (Mr. Payne was recently elected president of the Pacific Coast Gas Association.)

"Payneheat," established 28 years ago, and in peacetime, one of America's leading manufacturers of gas furnaces, has concentrated on government orders for nearly two years, first having equipped with heating appliances, more than 50 camps and cantonments; then having converted 100 per cent to the production of materials for war, including field photographic equipment for the U. S. Army Air Corps, parts for airplane manufacturers, and secret devices for the Army and Navy, according to Company officials.

Stacey Bros. Bulletin on Army-Navy Award

Commemorating the Army-Navy Production Award granted to them, Stacey Bros. Gas Construction Co. of Cincinnati has issued a colorful 24 page bulletin, 8½ x 11, replete with photos of the presentation and views of shop operations on war products.

Included is a brief outline of the Company's history, the present personnel of directors and officers, together with a message to employees from Wm. O. Gruening, president. Attention is called to the 161 former workers now in the armed forces.

A copy of the pictorial story may be had by writing the Company.

Accident Rate Bulletin

A 24 page pamphlet issued by the National Safety Council, 20 North Wacker Drive, Chicago, 6, Ill. is devoted to accident rates in the Public Utility industries during 1942.

Comparisons are listed showing rates in various industries and the frequency and severity changes of 1941-42.

Individual tabulations are given covering the manufactured and natural gas divisions as well as the electrical.

W. M. Hickey Elected a Director of U.G.I.

The United Gas Improvement Company recently announced that Mr. William M. Hickey, President, The United Corporation, has been elected a Director of the Company, to fill a vacancy on the Board.

"Heat Transmission Through Furnace Walls"

Charts to simplify the solution of heat-transfer problems in connection with refractories and high-temperature insulation are contained in a new 16-page bulletin published by The Atlas Lumnite Cement Company, 135 East 42nd Street, New York 17, N. Y. Curves on the ten full page charts are plotted in terms of conductivity factors. The novel arrangement makes it possible to use the charts for firebrick, insulating brick, refractory concrete, plastic refractories or any refractory material for which the conductivity (K-factor) is known.

The industrial furnace designer can use the charts for rapid determination of cold-face temperatures and heat losses. He can select the proper material—or combination of materials—and wall thickness to give a desired cold-face temperature or minimize heat-loss. Efficiencies of two or more designs of furnace wall or flue lining can readily be compared. The curves are calculated in accordance with A. S. T. M. "Recommended Procedure for Calculating Heat Loss through Furnace Walls."

Information on the conductivity factors of some common refractory materials is given with remarks on the reliability of test data and their practical usefulness. Designers and operators of industrial furnaces, flues, stacks and process heating equipment will find the booklet a time-saver.

A. W. Humm Becomes V.P. Hixon-O'Donnell Co.

Albert W. Humm has been elected a Vice President of Hixson-O'Donnell Advertising, Inc., New York. Mr. Humm has been associated with the firm for the past two years, in charge of the Public Utility and Home Appliance accounts.

Under his management this department of the Agency has considerably expanded its merchandising, advertising and sales promotion service to a number of utility and appliance concerns. Mr. Humm's new appointment marks his rounding out of thirty years in the advertising field.

In that time he has originated many productive sales promotion and advertising campaigns for manufacturing and utility concerns. He was formerly advertising and sales promotion manager of Standard Gas Equipment Corporation, was active in the work of the American Gas Association, and in previous advertising agency connections created and placed national campaigns for gas appliance, gas equipment and gas refrigerator manufacturers.

GOODMAN
USED SINCE 1897
Z "HANDLE & LOCKING SLEEVE
GAS MAIN STOPPER

The Reliable Shut-Off for Street Mains

THE GOODMAN STOPPER

Now has the "Z" handle for easy manipulation. When locked in place it holds. Stopper cannot slip. Gas cannot pass. Adjusted in 30 seconds.

Ask for circulars on this and other distribution equipment.

Nearly a half century of service to the Gas Industry.

Safety Gas Main Stopper Co.
523 Atlantic Avenue, Brooklyn, New York

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CHEMICAL TABLES

A Handbook of selected subjects from the Handbook of Chemistry & Physics 1938 Edition.

Subjects covered include Mathematical Tables; Properties and Physical Constants of Organic and Inorganic Compounds; General Chemical Tables; Specific Gravity and Properties of Matter; Heat and Hygrometry; Electricity: Light; Quantities and Units. Also other miscellaneous subjects.

Sectionally arranged with a complete index. Size 5" x 7¼", 1390 pages, flexible leatherette cover.

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"B" TYPE METERS
DIAPHRAGMS

Cleveland Gas Meter Co.

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CRUSE-KEMPER COMPANY

AMBLER, PA.

GAS HOLDERS • PURIFIERS • INSPECTION

40 YEARS OF SOUND

STEEL PLATE CONSTRUCTION

Aircraft Heater

(Continued from page 35)

association of the fuel-air mixture results in complete combustion within a predetermined period of time and length of flame travel.

The annulus or blanket of hot combustion air which surrounds the flame core not only provides an adequate supply of oxygen but actually scrubs the inside surface of the combustion tube and prevents direct flame impingement on the inner metal surface. At the same time, it effectively minimizes the accumulation of carbon, lead salts, or any other combustion products on heating surfaces.

High-altitude operation is maintained with this flexible, non-critical type of combustion. The ideal ratio of air to fuel for proper combustion is approximately fifteen-to-one by weight. The proportion of combustion air may vary from 65 per cent to 800 per cent of the theoretical requirement and still maintain combustion. The performance of this unit is indicated by the fact that these extreme variations do not actually occur in heater operation in aircraft. The combustion air is controlled within practical close limits, by differential air controls of various types suited to the particular aircraft application.

The advantage of this broad range in fuel-air ratio can be appreciated from a comparison of atmospheric densities at different altitudes. The air density at 45,000 feet is approximately one-fifth of that at sea level. Laboratory tests and actual flight operation have proven that this aircraft heater will operate at the high densities found at sea level and at the low densities found at 45,000 feet. The heater has been flight tested at 37,500 feet.

J. French Robinson Appointed Chairman A.G.A. Committee on War Activities

Ernest R. Acker, president of the American Gas Association, has announced the appointment of J. French Robinson, president of The East Ohio Gas Company, Cleveland, as chairman of the Association's vital Committee on War Activities. Mr. Robinson, a vice-president of the Association, succeeds Mr. Acker as head of this committee whose function is to coordinate the gas industry's war effort.

Mr. Robinson is exceptionally well qualified to fill this post as he has been in close touch with governmental agencies in several official capacities. He is a member of the Petroleum Industry War Council and general chairman of the Natural Gas and Natural Gasoline Committees under the Petroleum Administration for War. He is also chairman of the Natural Gas and Natural Gasoline Committee of PAW District No. 1.

National Council Elects Evansville Man Vice President

Robert J. Canniff, of Evansville, Ind., sales promotion and advertising manager for Servel, Inc., has been elected vice-president of the National Noise Abatement Council, it has been announced here by S. L. Hooper, of Washington, D. C., president of the organization.

In reporting Mr. Canniff's election at the annual meeting held in the New York Advertising Club, Mr. Hooper said that forty-two local councils throughout the United States, are conducting wartime programs to stimulate interest in reducing needless noise in factory, home, office and street, and particularly in war production industrial areas where nightshift workers sleep days.

Mr. Hooper also reported that midwestern cities have been especially active in the Council's fight against unnecessary noise.

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COAL GAS PLANT
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BLOWERS
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CONDENSERS
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We May Have the Equipment or Part that YOU NEED!

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CONSUMERS POWER CO.
JACKSON, MICHIGAN

BOOK REVIEW

Gas Chemists' Manual of Dry Box Purification of Gas, with an Annotated Bibliography. By Gilbert E. Seil. Price to A.G.A. members, $3.50. Price to non-members, $5.00.

This book, the first of its kind ever published, appeared in October. It simply and thoroughly describes the chemistry and physics of gas purification. Presented for the first time, in book form, are the principal fundamentals concerning oxide purification, and a complete account of recent developments in the art of evaluating purifying materials, specifications, tests and other standards. In addition, the volume contains a reference bibliography which not only gives the author, title of the article, the date and place of publication, but a concise description of the contents of the article.

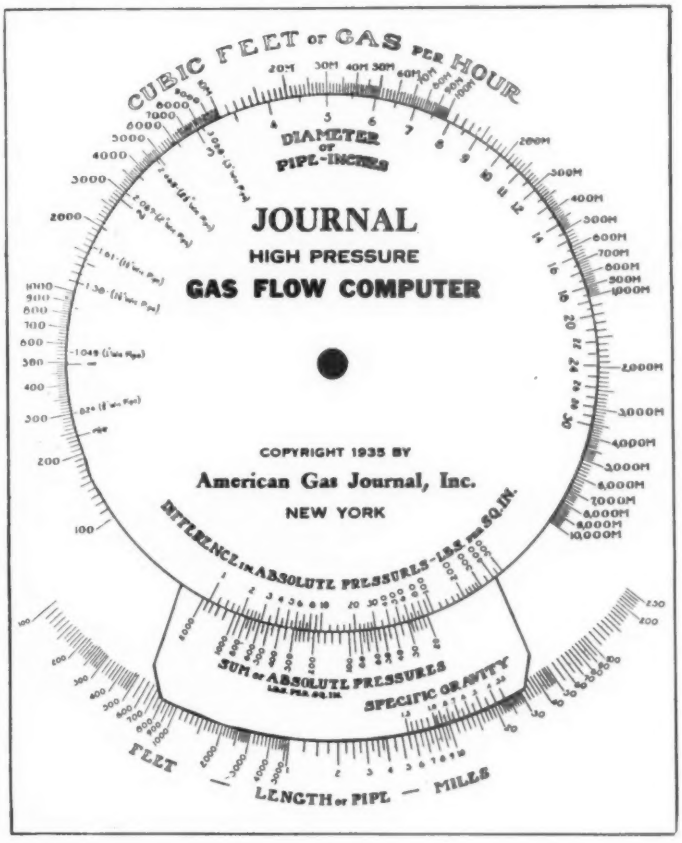
Stove Industry Advisory Council Makes Recommendations

A meeting of the Stove Industry Advisory Council was held in Washington, D. C., on November 17. All members of the Stove Rationing Staff met with the Council.

The Council recommended:

1. That regulations and instructions regarding the stove rationing program be simplified and consolidated whenever and wherever possible.
2. That a committee of Council members work with the OPA staff in determining future adjustments to heating stove inventory allowances.
3. That seasonality of heating stove sales be reflected by seasonal increases and decreases in inventory allowances.
4. That the division between domestic rationed stoves and commercial unrationed stoves be studied and revised.
5. That the question of uptrading be carefully studied.
6. That endorsement of certificates at the manufacturer's level be revised.
7. That the listing of manufacturer's names in the Stove Industry Letter be continued.
8. That study be made of the need for a stove expert's certification on an application for a certificate.
9. That the classification of rationed and unrationed stoves, domestic and commercial, be reviewed.
10. That the next meeting of the Council be held not later than March 15, 1944.

"Journal" Gas Flow Computers



New Improved Gas Flow Computers now available of durable celluloid, encased in a convenient leatherette cover with complete instructions.

Actual Size 6¼ x 7½

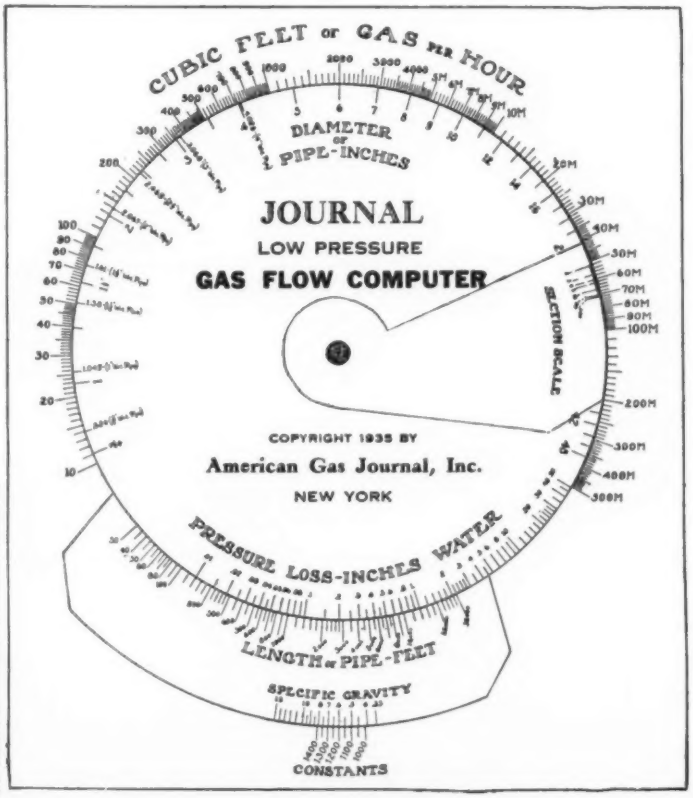
High Pressure Computer Range:

Cu. Ft. of Gas Per Hour—100-10,000 M
Diameter of Pipe Inches ¾-30
Difference in Absolute Pressure—Lbs. per sq. in. 1-500
Sum of Absolute Pressures—Lbs. per sq. in. 2000-20
Specific Gravity 1.5-.35
Length of Pipe—Feet 100-5000
Length of Pipe—Miles 1-250

Low Pressure Computer Range:

Cu. Ft. of Gas Per Hour—10 to 500 M
Pipe Diameter ¾" to 48" (including standard and actual weight up to 4")
Pressure Loss Inches .01-10.
Length of Pipe—Feet 30-30,000
Specific Gravity 1.5-.35
Constants 1400-1000

Price $3.50 Each, Postage Prepaid



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Please enter our order for Computers as follows at $3.50 each, postage prepaid

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NAME .....

ADDRESS .....

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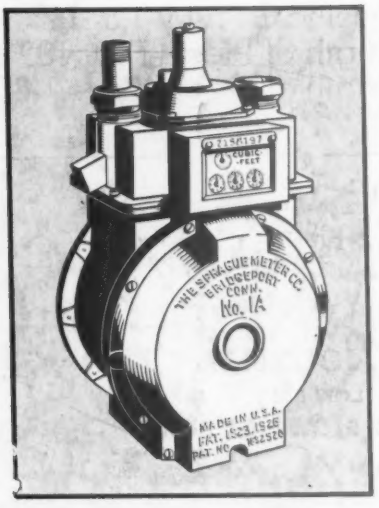

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